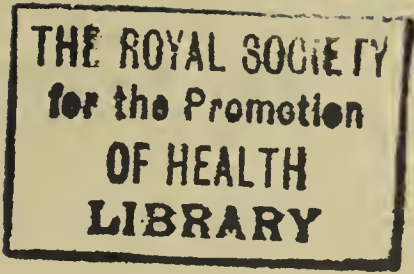




South Australia



Annual Report

of the

Department of Public Health

and the

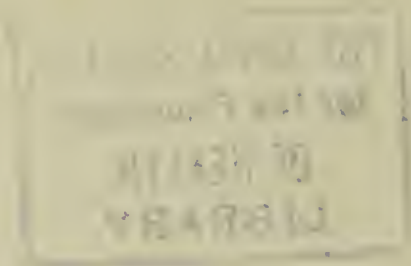
Central Board of Health

for the

Year ended 31st December, 1963

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THE PUBLIC HEALTH

Annual Report of the Department of Public Health and the Central Board of Health to the Minister of Health (Hon. Sir Alexander Lyell McEwin, K.B.E., M.L.C.)

Sir—We have the honour to submit the report for the Department of Public Health and the Central Board of Health for the year ended 31st December, 1963. The report is divided into the following sections :

1. Staff and administration.
2. Public Health Branch.
3. School Health Branch.
4. Poliomyelitis Branch.
5. Tuberculosis Branch.
6. Summary and comments.

Sections 2, 3, 4 and 5 deal with branches of the Department and have been prepared by the officers in charge, namely the Principal Medical Officer (Public Health), the Principal Medical Officer for Schools, the Principal Medical Officer (Poliomyelitis) and the Director of Tuberculosis.

1. STAFF AND ADMINISTRATION

Personnel of the Board—During the year the members of the Board were:

Chairman—Philip Scott Woodruff, M.D., B.S., D.T.M. & H., F.R.A.C.P.

Members appointed by the Governor—

John Burton Cleland, C.B.E., M.D.Ch.M., F.R.A.C.P.

George Hugh McQueen, M.B., B.S., D.P.H., D.T.M., F.R.S.H., F.R.S.T.M. & H.

Member elected by the metropolitan local boards—

Charles John Henry Williamson, J.P.

Member elected by other local boards—

Alfred Bertram Cox, J.P., F.A.S.A., F.C.I.S.

Secretary—

Murray Edwin Stephens Bray.

Staff of the Department—As at 31st December, 1963, the principal staff consisted of the Director-General of Public Health (Dr. P. S. Woodruff), the Principal Medical Officer (Public Health) (Dr. G. H. McQueen), the Principal Medical Officer for Schools (Dr. C. O. Fuller), the Principal Medical Officer (Poliomyelitis) (Dr. R. R. Horton), the Director of Tuberculosis (Dr. T. G. Paxon) and the Secretary (Mr. M. E. S. Bray). Throughout the year there was an average of 214 officers and employees.

“Good Health”—Distribution of these booklets to local boards, medical officers and other interested persons continued this year. Subjects dealt with were:

Rules governing prescribing, supply and labelling of restricted drugs, food for the hungry, food poisoning, leptospirosis, why talk of lung cancer, dangers in excessive drug taking, spread of infection in swimming pools and nursing and community health.

The National Health and Medical Research Council and Committees—The 55th session at Brisbane and the 56th session at Canberra were both attended by Dr. P. S. Woodruff as State representative on the Council and on the Public Health Advisory Committee.

Dr. G. H. McQueen, Principal Medical Officer (Public Health), attended the Occupational Health Committee meetings and Mr. R. C. McCarthy, Pharmaceutical Inspector, attended the meetings of the Food Standards and Poison Schedules Committees.

Maternal Mortality Committee—This Committee met on three occasions during 1963 and considered 14 maternal deaths which occurred during the year. Preparation of a consolidated report of the first 2½ years of the Committee's work was commenced.

Owing to ill health, Dr. Ruth Heighway resigned as representative of the Queen Victoria Maternity Hospital. The Committee wishes to express appreciation of her valuable services.

Dr. George T. Gibson was appointed in her place in August 1963.

Advisory Council on Health and Medical Services—This Council is constituted under Section 4 of the Health and Medical Services Act 1949 and the present members are:

Director-General of Public Health—

Philip Scott Woodruff, M.D., B.S., D.T.M. & H., F.R.A.C.P., (Chairman).

Director-General of Medical Services—

John William Rollison, M.B., B.S., F.H.A.

Principal Medical Officer of the School Health Branch, Public Health Department—

Clarence Oliver Fuller, M.B., B.S., D.P.H.

Director of Mental Health—

William Alexander Cramond, O.B.E., M.D., D.P.M.

Director of Tuberculosis—

Thomas Gordon Paxon, M.D., M.R.C.P.

Medical Practitioner appointed by the Governor, on the nomination of the South Australian Branch of the Australian Medical Association—

Leonard Ross Mallen, O.B.E., M.B., B.S.

Woman Medical Practitioner appointed by the Governor—

Annie Winifred Wall, M.B., B.S.

The Council met on several occasions during the year to consider a question referred by the Honourable the Minister of Health, in which the Council was asked to investigate and report on the ascertainment of handicapped children. Evidence was obtained from a wide section of the community interested in this problem and a report of the findings of the Council was submitted to the Honourable the Minister of Health late in 1963.

2. PUBLIC HEALTH BRANCH

This report consists of the following sections:

- (a) Staff
- (b) Vital Statistics
- (c) Legislation
- (d) Control of Infectious Diseases
- (e) Control of Venereal Diseases
- (f) Supervision of Environmental Sanitation
- (g) Supervision of Septic Tank Sewage Disposal Systems
- (h) Supervision of Food and Drugs
- (i) Supervision of Occupational Health
- (j) Health Education

(a) STAFF

The professional and sub-professional staff of the Public Health Supervision and Inspection Branch of the Department of Public Health at the end of 1963, consisted of:

One Principal Medical Officer
 Two District Medical Officers
 Two Part-time District Medical Officers
 One Medical Officer for Gaols and Prisons
 One Chief Inspector
 One Senior Inspector
 Sixteen Inspectors
 One Nurse Inspector
 One Inspector's Assistant
 Fifteen Part-time Inspectors
 Two Pharmaceutical Inspectors
 One Biophysicist
 One Scientific Officer
 One Graduate Technician

Vacancies existed for one Industrial Medical Officer, one District Medical Officer, one Medical Officer for Aborigines, one Scientific Officer and one Health Inspector for Aborigines.

During the year, Dr. L. G. F. Gillam, who has been acting as District Medical Officer since his appointment, resigned from this position. Dr. B. H. Jeanes, one of the District Medical Officers, completed the course and passed the required examinations for the Diploma of Public Health at the School of Public Health and Tropical Medicine, University of Sydney. Since his return, he has supervised the work of the Occupational Health Section.

Mr. J. L. Davis, pharmacist at the Queen Elizabeth Hospital, was appointed to the vacant position of Pharmaceutical Inspector following the resignation of Mr. K. Rohlfing.

Miss R. H. Gregory, B.A. (Cambridge), after twelve months' work on a survey of atmospheric moulds, spores, and pollens, returned to England at the end of the year, and Miss P. A. Bull, B.Sc., was appointed in December to continue this survey.

(b) VITAL STATISTICS

The following particulars for 1963 have been obtained from the Deputy Commonwealth Statistician. Some figures are subject to slight revision. Details for 1962 are shown in parenthesis.

Population—The estimated mean population for the State in 1963 was 1,008,862 (989,400).

Births—The number of births registered during 1963 totalled 21,367 (21,361).

The masculinity ratio, *i.e.* the ratio of male births to female births, does not as a rule vary greatly from year to year. However, in South Australia there have been, in recent years, rather wide variations. The ratio of 102·77 in 1959 was only 0·34 above the lowest recorded ratio of 102·43. The ratio for both 1962 and 1963 was 106·23. This is the highest since 1948 when it was 106·32.

Still Births—During 1963 a total of 262 still births were recorded. They are not included in births or deaths figures.

Deaths registered—A total of 8,201 (8,232) deaths were registered during 1963, only a few less than the 1962 figure which is the highest number on record. The death rate of 8·13 is the second lowest on record, the lowest being 8·06 in 1961.

Infantile Mortality—Infant deaths registered during 1963 totalled 399 (409). The resultant infant mortality rate was 18·67 (19·15) the lowest rate on record, the second lowest being 18·94 in 1960.

There were 276 (287) deaths of children under one month, and 123 (122) deaths of children from one month to one year. The main causes are shown in the following Table No. 1—

TABLE 1—INFANT DEATHS: MAIN CAUSES SOUTH AUSTRALIA, 1959-1963

Cause	1959	1960	1961	1962	1963
	No.	No.	No.	No.	No.
Diarrhoea.....	7	8	12	7	15
Congenital Malformations	72	95	102	76	91
Prematurity	69	82	72	77	72
Injury at birth	42	39	46	56	41
Post-natal Asphyxia and Atelectasis	58	28	38	39	36
Other diseases peculiar to early infancy	49	43	65	52	63
Cerebro-spinal Meningitis	1	1	3	—	1
Meningitis	6	5	1	5	—
Whooping Cough	—	1	—	1	1
Pneumonia	44	23	38	47	42
Hernia and Intestinal obstruction	2	6	8	4	6
External causes	19	12	24	11	9
All other causes	53	54	39	34	22
Total	422	397	448	409	399

Marriages—The number of marriages registered during 1963 totalled 7,302 (7,021). The rate per 1,000 of the mean population was 7·24 (7·10). The mean age of marriage for bachelors was 25·49 (25·76) years, and for spinsters 22·12 (22·44).

Summary—The following Table No. 2 shows the numbers and rates per 1,000 of the mean population of registered births, deaths, and marriages, and the infantile death rates per 1,000 live births for the years 1958-1963.

TABLE 2—BIRTHS, MARRIAGES AND DEATHS: NUMBERS REGISTERED AND RATES

Period	Births Registered		Marriages		Deaths Registered			
					Total		Infants	
Year	No.	Rate (a)	No.	Rate (a)	No.	Rate (a)	No.	Rate (b)
1958	20,047	22·35	6,505	7·25	7,743	8·63	449	22·39
1959	20,372	22·12	6,614	7·18	7,943	8·62	422	20·71
1960	20,966	22·19	6,607	6·99	7,804	8·26	397	18·94
1961	22,399	23·10	6,804	7·02	7,815	8·06	448	20·00
1962	21,361	21·58	7,021	7·09	8,232	8·32	409	19·15
1963	21,367	21·18	7,302	7·24	8,201	8·13	399	18·67

(a) Per 1,000 of Mean Population.

(b) Per 1,000 Live Births.

(c) LEGISLATION

Health Act and Regulations—An amendment to the Health Act provided for the appointment of “The Clean Air Committee” and the making of regulations relating to clean air.

A regulation was made declaring methyl chloride a dangerous substance, restricting its use in refrigeration, and requiring ventilation of rooms where the substance is used in refrigerators.

Regulations under the Food and Drugs Act—Regulations dealing with food additives, modifying agents, jelly crystals, food colours, margarine, thickened cream, and colouring of “pet foods”, came into force. In addition, regulations were made requiring that eye drops and eye lotions be sterile when sold and contain a suitable anti-bacterial agent.

Other Acts and Regulations—During 1963 there were no amendments or additions to other Acts and Regulations administered by the Central Board of Health or the Department of Public Health.

(d) CONTROL OF INFECTIOUS AND NOTIFIABLE DISEASES AND TUBERCULOSIS

Statistics—Infectious and notifiable diseases in the Second and Third Schedules of the Health Act and tuberculosis are notified to local boards of health and the Central Board of Health. Tuberculosis is notified to the Central Board of Health in the first place.

Those notified in the years 1961, 1962 and 1963 are shown in Table 3.

TABLE 3

Infectious Diseases	Cases			Deaths		
	1961	1962	1963	1961	1962	1963
Acute infective encephalitis	10	2	6	1	—	2
Amoebiasis	—	1	—	—	—	—
Ancylostamiasis	—	—	—	—	—	—
Anthrax	—	—	—	—	—	—
Bilharziasis	—	—	—	—	—	—
Cholera	—	—	—	—	—	—
Diphtheria.....	5	4	—	—	—	—
Diarrhoea, infantile infective	3	—	34	—	—	—
Dysentery, Bacillary	97	46	197	1	—	—
Influenza, in epidemic form	—	—	—	—	—	—
Leprosy	—	—	1	—	—	—
Leptospirosis	—	—	1	—	—	—
Malaria	2	1	—	—	—	—
Meningococcal infection	5	10	6	2	2	2
Ornithosis	3	—	1	—	—	—
Paratyphoid fever	1	—	11	—	—	—
Plague	—	—	—	—	—	—
Poliomyelitis	44	19	11	3	2	1
Puerperal pyrexia	1	—	2	—	—	—
Salmonella infection	36	69	48	—	1	—
Scarlet fever	129	181	198	—	—	1
Small pox	—	—	—	—	—	—
Trachoma	124	—	54	—	—	—
Tuberculosis, pulmonary	177	210	205	46	35	27
Tuberculosis, other forms.....	37	32	31	3	1	—
Typhoid fever	3	1	3	—	—	—
Typhus fever (louse borne).....	—	—	—	—	—	—
Yellow fever	—	—	—	—	—	—

Notifiable Diseases	Cases			Deaths		
	1961	1962	1963	1961	1962	1963
Acute rheumatism	9	10	5	—	—	—
Brucellosis	—	—	—	—	—	—
Chorea (St. Vitis)	1	—	—	—	—	—
Dengue	—	—	—	—	—	—
Eclampsia	—	—	1	—	—	1
Erythema Nodosum	1	1	1	—	—	—
Encephalitis, following another disease	1	2	3	—	—	—
Filariasis	—	—	—	—	—	—
Homologous serum jaundice	1	—	—	—	—	—
Hydatid disease	1	1	—	—	2	—
Infective hepatitis.....	1,406	504	293	7	3	—
Lead poisoning.....	—	1	1	—	—	—
Ophthalmia	—	1	2	—	—	—
Rubella	66	541	621	—	—	—
Tetanus	2	—	—	2	3	—
Trichinosis	—	—	—	—	—	—
Typhus fever—flea borne	—	—	—	—	—	—
mite borne	—	—	—	—	—	—
tick borne	—	—	—	—	—	—

The following diseases were reported more frequently than in 1962:

- Acute Infective Encephalitis (2)—6
- Diarrhoea Infantile Infective (0)—34
- Encephalitis Post Infectious (2)—3
- Dysentery Bacillary (46)—197
- Leptospirosis (0)—1
- Ophthalmia (1)—2
- Paratyphoid Fever (0)—11
- Puerperal Pyrexia (0)—2
- Rubella (541)—621
- Scarlet Fever (181)—198
- Trachoma (0)—54
- Typhoid Fever (1)—3

and the following were reported less frequently:

- Acute Rheumatism (10)—5
- Amoebiasis (1)—0
- Diphtheria (4)—0
- Hydatid Disease (1)—0

Infective Hepatitis (504)—293
Meningococcal Infection (10)—6
Malaria (1)—0
Poliomyelitis (19)—11
Salmonella Infection (69)—48
Tuberculosis Pulmonary (210)—205
Tuberculosis other forms (32)—31
The figures in parenthesis refer to 1962.

Notable increases occurred in the incidence of trachoma and the intestinal diseases—infantile diarrhoea, bacillary dysentery, paratyphoid and typhoid fever.

Infective Hepatitis—Since compulsory notification came in force in South Australia in 1954, the number of cases reported each quarter are shown in Table 4:

TABLE 4—NOTIFICATIONS OF INFECTIVE HEPATITIS IN SOUTH AUSTRALIA

Year	1955	1956	1957	1958	1959	1960	1961	1962	1963	Totals
1st quarter	72	310	93	50	289	142	490	254	86	1,786
2nd quarter	103	162	48	38	127	154	237	91	56	1,016
3rd quarter	151	158	73	41	106	247	306	74	58	1,214
4th quarter	176	161	44	178	227	578	373	85	93	1,915
Totals	502	791	258	307	749	1,121	1,406	504	293	5,931

Thus there have been 211 less cases during 1963, compared with 1962. The smaller incidence, in both 1962 and 1963, as compared with 1961, may reflect the true endemic level of this disease, and if so an epidemic in 1964 is possible, in accordance with the cyclic nature of its epidemiology.

Gastro-Intestinal Diseases—This group of diseases includes Salmonella infections, Shigella infections (reported as bacillary dysentery) and infantile infective diarrhoea.

The number of cases of salmonellosis has fallen from 69 in 1962 to 48 in 1963. These cases have been reported from all places where material for investigation can be taken without much difficulty.

There has been a significant increase in reported cases of bacillary dysentery (+151) and infantile diarrhoea (+34) during the year. This increase may be more apparent than real, due to improved liaison between the Department and Laboratories and local boards of health, resulting in more intensive follow-up of cases, with examination of all family contacts. More carriers of these infections were detected in this way. But it is difficult to escape the conclusion that the actual incidence in the community at least in some parts of the State has increased.

Paratyphoid Fever—Paratyphoid fever is caused by Salmonella paratyphi A or B. There were 11 cases of this disease reported during 1963, compared with none in 1962. They were associated with two separate occurrences of the disease, when it was introduced into South Australia by newly-arrived migrants. There were ten cases in the first occurrence in January 1963, all of whom were migrants, and one in the second. In each incident, all domiciliary contacts were interviewed and investigated and no further cases discovered.

The same migrant ship was involved on both occasions. Reports were made to the Commonwealth Department of Health, which took the necessary steps to investigate personnel on board. A carrier was discovered among the ship's company, and was removed by the shipping company.

Typhoid Fever—During the year, three cases of typhoid fever were reported and subsequently fully investigated. Two of the cases occurred in migrants. The sources of infection in these two cases were traced; one patient had been infected by his wife, and the other by a close associate. The carriers were treated, and have been cleared of the infection. The third was an elderly ex-nurse, who probably became infected many years ago, as, on investigation, no "carriers" were found among her contacts.

S. typhi type D1 was recovered from the first patient and contact, S. typhi B2 was recovered from the second patient and contact, and S typhi type D1 was recovered from the third patient.

Trachoma—Following the diagnosis of trachoma in a young aboriginal child, adopted into a white family living in the metropolitan area, an investigation of the disease in South Australia was commenced.

Continued clinical and laboratory examinations were carried out on aborigines living at Gerard Mission at Coober Pedy and at Musgrave Park. These surveys revealed a high prevalence of infection amongst all age groups. However, serious sequelae, which are a feature of the disease in other countries, were rare.

Similar surveys have been conducted amongst the R.A.A.F. and R.A.F. personnel at Edinburgh Air Field, and surveys are also being carried out at the Royal Adelaide Hospital.

This work is still proceeding and final conclusions cannot be reached at this stage. However, it does appear that the disease, as it occurs amongst the white population, is much modified and often without any serious after-effects. This is probably due to good hygienic and environmental conditions.

Increased awareness by ophthalmologists of the disease, and the diagnostic work of the Virus Laboratory of the Institute of Medical and Veterinary Science account for the great increase in notified cases in 1963 as compared with 1962.

Poliomyelitis—During the year there were further decreases in the incidence of poliomyelitis and the number of deaths caused by that disease. More details are given in the report of the Poliomyelitis Branch.

Tuberculosis—The death rate from tuberculosis per 100,000 of the mean estimated population fell from 3.64 in 1962 to 2.67 in 1963. The incidence rate also fell slightly from 23.7 in 1962 to 23.3 per 100,000 of the estimated mean population in 1963. Further details are given in the report of the Tuberculosis Branch.

Diphtheria—Diphtheria was not notified during 1963. This is the first year since 1899, when diphtheria was proclaimed a notifiable infectious disease, that no notifications of its occurrence were received.

The highest number of notifications in any year was during 1921 when 2,744 notifications were received.

Other diseases—No significant alterations occurred in the incidence of other diseases.

Immunization—Routine immunization was continued during the year by officers of the Branch, in areas outside local government control, and by local boards of health within their own territories.

By means of circulars, newsletters, pamphlets and personal advice, emphasis was again placed on the need for vaccination against smallpox.

Medical Examinations—During the year 49 wards of the Commonwealth, now living in South Australia, and who were previously contacts of persons with tropical infectious diseases in the Northern Territory, were given routine medical examinations to detect the presence of any disease. No tropical diseases were found among them.

(e) CONTROL OF VENEREAL DISEASE

During 1963, £2,321 (£2,436) was spent by the Department of Public Health on venereal disease investigation and treatment. The majority of this amount was paid to the Institute of Medical and Veterinary Science for bacteriological and serological tests done for private practitioners.

A total of 90 (58) patients were investigated at the Department's Venereal Diseases Investigation Clinic at the Royal Adelaide Hospital.

Gram positive cocci resembling gonococci were seen in smears from 25 (7) of these patients and serum from 6 (3) gave positive gonococcal complement fixation tests.

One patient gave a positive serological test for syphilis.

Contacts of a number of patients being treated by private practitioners for venereal diseases were investigated.

The figures in parentheses refer to the year 1962.

(f) SUPERVISION OF ENVIRONMENTAL SANITATION

Routine Inspection—Officers of the Public Health Supervision Branch of the Department are responsible to the Central Board of Health for ensuring that provisions of the Health Act designed to maintain a proper sanitary condition within the State are carried out and also that the requirements of the Food and Drugs Act are implemented.

The Central Board of Health and its officers act in a supervisory and advisory capacity to local boards of health and their officers.

During 1963, it has again been necessary to concentrate on assistance to local boards in matters of special difficulty or importance, with the result that routine inspections were carried out in only four local board areas, including one metropolitan local board.

During casual visits to other local board areas it was noted that standards of sanitation had deteriorated since routine inspections had ceased.

Routine inspections in local board areas serve a useful purpose in that local board officers can be advised and guided on health matters in their respective areas, and their work co-ordinated throughout the State.

Land Subdivisions—During the year, the Town Planner submitted for advice a further 13 areas for subdivision into building allotments.

Reports were prepared on existing conditions or conditions likely to develop relative to the satisfactory disposal of refuse and liquid wastes.

It was necessary to report that the areas of some proposed allotments were not considered large enough for the continuous disposal of domestic waste waters. Larger allotments were recommended in these instances.

Air Pollution—Collection of deposited material from 50 sampling points in the Adelaide metropolitan area has continued during the year.

In practice overseas, the most useful information from such surveys has been drawn from monthly readings, extending over a period of five years, though significant changes have sometimes been detected within a few months.

The third year of the survey has now been completed and results so far obtained indicate the need for further investigation.

Individual complaints of factories and private premises causing air pollution problems have also been investigated and action taken to prevent further cause for complaint.

On a number of occasions during May a temperature inversion layer developed over Adelaide due to climatic conditions. Contaminants being discharged into the atmosphere over the city were trapped with little or no vertical dispersion. This phenomena has been associated with air pollution problems elsewhere and it is important to know that it can occur in Adelaide.

These phenomena remained for a period of about 6-7 hours and during that time on one occasion atmospheric sampling was carried on for a period of four hours. The analysis revealed the presence of sulphur dioxide in quantities of less than 0.01 parts per million of air (V/V).

Private Hospitals and Rest Homes—Routine inspections of private hospitals and rest homes have been continued throughout the year in the metropolitan area and part of the country.

Special investigations have sometimes necessitated more frequent visits.

A special survey on sterile water supplies at hospitals, which was commenced in 1962, was continued during the year. Final conclusions have not yet been reached.

Fly Survey—The fly survey, commenced in the Adelaide metropolitan area in 1961 and continued in 1962, was further continued throughout 1963. The highest levels of infestation occur in early and late summer, as the very cold and very hot dry weather conditions are not conducive to flies breeding.

During this year, particular attention was paid to temporary pit and pail type privy accommodation at building and construction sites, as well as the storage of organic material at glasshouses and places where animals are kept commercially.

At a meeting of metropolitan local authorities in October, inadequate and poorly constructed privy accommodation at building sites was discussed with the building trade with a view to amending the Health Regulations to provide a satisfactory standard.

Methods of collecting, storing and using organic material in preparing glasshouses for cropping vary from district to district and difficulties are being experienced in arriving at a satisfactory way of treatment in order to prevent flies breeding in the material.

Inspections were also concentrated on places where animals are kept commercially, with a view to improving the methods of collecting, storing and removal of manure.

In October a conference was held in Adelaide to which all metropolitan and some near country local boards of health were invited to send representatives. Most local boards were represented by a member of the local board in addition to its inspector or inspectors.

Following this conference, it was proposed that meetings be held once every three months to which all health inspectors be invited to discuss matters of mutual interest.

A similar fly survey was carried out at Woomera at the request of the Senior Medical Officer there. The results of the survey showed that the main problem was the bush-fly (*Musca sorbens*) and not the house-fly (*Musca domestica*).

Mosquitoes—Over a number of years many complaints have been received of mosquitoes reaching plague proportions in the vicinity of the Port River, on Torrens Island, and in the St. Kilda area.

Aerial spraying of mangrove swamps was decided upon as the best method of control. This was done and reports from various Government and Local Government authorities concerned in the area indicated that the immediate results were satisfactory.

The upper tidal reaches of the Port River adjacent to the Henley and Grange and Woodville Local Boards of Health areas were also again aerially sprayed to reduce mosquitoes in that area, again with satisfactory results.

Sanitation of Out-Back Areas—Following visits to the Coober Pedy and Andamooka Opal fields to encourage residents to improve their primitive methods of night soil disposal, it was found necessary to prosecute some for non-compliance with Health Act notices. Very great improvement is reported.

Dust Nuisance—As a result of many complaints made over a period of seven years of a dust nuisance from sandblasting operations in the premises of Dimet Limited at Hilton, a complaint was laid by the Central Board of Health in 1962. The case was heard in June 1963 and resulted in the company being found guilty on two charges of breaches of the Health Act and the Local Government Act.

Mites—Parkside Mental Hospital—Complaints have been made over several years of body rashes on patients and staff in some wards of the Parkside Mental Hospital.

Investigations indicated that the complaint was probably caused by mites.

Fumigation of affected wards was carried out and the incidence of rashes has since declined.

District Inspector's Report (Whyalla)—This part of the report gives details of activities carried out from the Department's office in Whyalla.

Whyalla has at present a population of approximately 17,000 people and is estimated to be increasing at the rate of 200 per month.

Generally, throughout the year, duties were confined to Whyalla but inspections were also carried out at Iron Knob, Iron Baron, Cowell, Cleve and Kimba, these being usually on a special request basis.

It is anticipated that as a result of a proposed large building programme the volume of work will increase during 1964.

Septic Tank Inspections—During the year, 336 septic tanks were installed in Whyalla and passed as being satisfactory. These were inspected on a daily request basis and required an average of 3-4 inspections per installation. A number of larger installations were supervised with regard to drainage requirements. These included the Broken Hill Proprietary Company Limited's chemical laboratory, the new laundry block for the Whyalla Hospital and a £370,000 building for the Institute of Technology. Regular inspections of the larger buildings were made. In connection with the Whyalla Hospital a 3,600 feet six-inch earthenware drain was laid to carry septic tank effluent from the Hospital to the Broken Hill Proprietary Company Limited's sewage treatment plant. The drain will ultimately connect into the hospital's new septic tank which is at present under construction. Daily inspections of the works were made over a six-weeks period.

Inspections of septic tanks were carried out in country centres surrounding Whyalla. The number passed as being satisfactory totalled 53. In other cases, information was given as to the work required to make the installation comply with the Central Board's requirements.

Many of the South Australian Housing Trust homes in West Whyalla were found to be experiencing difficulty in disposing of septic tank effluent into soakage wells provided. Eleven samples of soil from various allotments in the proposed building area were collected and forwarded to the Department of Chemistry for examination to assess the soakage capacity of the soil at various depths and situations on the site. The subsequent report revealed that the most suitable level to dispose of the effluent was between ground surface to two feet deep. Resulting from the report, a recommendation was forwarded to the Housing Trust to provide an effluent disposal system at the two-foot level. The Trust decided to use the effluent box system; the first set was installed on the 1st June, 1963, and so far is functioning in a satisfactory manner. This system is now provided to all double-unit houses being built in Whyalla.

Inspections Outside Local Governing Areas—Situating outside the Whyalla Local Board of Health area are a number of establishments which come under the direct control of the Central Board of Health. Such places include the Whyalla Abattoirs, Whyalla Dairy, the Sanitary Depot and an area of land approximately five miles from the built-up section of the city, leased by the Lands Department for grazing purposes.

1. *Whyalla Abattoir*

The Whyalla Abattoir is situated four miles from Whyalla on the eastern side of the Port Augusta to Whyalla Road.

Regular inspections of the abattoir were made throughout the year. Any unsatisfactory conditions noted have either been or are being rectified. Generally the abattoir is being conducted in a satisfactory manner. Inedible offal and condemned meat is being cooked in a wet digester. When cooked, the hash is fed to pigs. While this is reasonably satisfactory it does create problems with the disposal of dry bones and other liquid wastes. As Whyalla's population increases so will the problems associated with this form of disposal increase. Consideration is being given by the Whyalla Abattoir to the provision of a dry rendering plant.

Generally, an improvement in the digester area has been made and the adult fly population is now low. Improved methods have been adopted for the disposal of blood and ingesta. No fly breeding has since been detected in the immediate area.

Relief meat inspection was provided at the Whyalla Abattoir during a total of 20 days absence of the meat inspector employed there.

2. *Whyalla Dairy*

The Whyalla Dairy is situated on the western side of the Port Augusta to Whyalla Road, four miles from Whyalla.

The dairy produces "Certified Milk" which is bottled and sold in Whyalla. Monthly inspections of the dairy were made and milk samples and swabs collected. Some difficulty was experienced in tracing and dealing with one source of bacterial contamination. Changes were made in the methods and materials used for sterilizing milking equipment, with satisfactory results.

During the year, two complaints, seven months apart, were received from the Whyalla Local Board of Health of milk from the Whyalla Dairy being delivered in unclean bottles. Each complaint was investigated. During this time the dairy was bottling approximately 2,400 bottles of milk per day. On each occasion closer supervision of the bottle washing section was requested. Generally, the dairy was found to be satisfactory in regard to cleanliness and repair. Minor breaches detected were rectified.

3. *Sanitary Depot*

The night soil depot is situated approximately one mile from the city on the southern side. Regular inspections of the depot were made, and it was being kept in a sanitary state.

4. *Grazing Allotments*

The Department of Lands has made available an area of land for grazing purposes approximately five miles from the city. Six blocks are occupied by piggeries and one by a horse stable.

Regular inspections of these were made during the year. Good co-operation has been received from the occupiers when constructing their piggeries and in keeping their sites in a satisfactory sanitary condition.

5. *Immunization*

Immunization against diphtheria, whooping cough and tetanus was provided for residents of Iron Knob and Iron Baron. Both townships are outside local government areas. Four visits with a Departmental Medical Officer were made to each area during the year.

The following table shows the number of persons immunized—

	Course	Boosters	Incomplete
Tetanus	29	13	15
C.D.T.	24	40	10
Triple Antigen . . .	8	1	5

A further visit is planned for April 1964.

Seven smallpox vaccinations were given to men in higher positions who frequently come into direct contact with persons from overseas visiting the works.

(g) SUPERVISION OF SEPTIC TANK SEWAGE DISPOSAL SYSTEMS

The Health Act requires that plans and specifications of septic tank sewage disposal systems be submitted to and approved by the Central Board of Health before installation is commenced.

During the year, 4,530 installations were approved and 4,880 permits were issued.

Inspections of all sites in the metropolitan peripheral area before approval is given was continued through the year. These inspections ensure that the best use of the site is made for effluent disposal.

In the Tea Tree Gully area, 13 common drainage schemes are in course of construction or have been completed. Several others are proposed for other non-sewered areas.

Common drainage schemes have been completed at Wallaroo, Kingscote and Pinnaroo, each serving part or all of the town concerned.

Preparatory work on common drainage schemes has been done in the following country towns: Barmera, Maitland, Meningie and Paringa.

Following numerous complaints of septic tanks not functioning satisfactorily in the Seaton, Fulham area and advice that many residents were pumping septic tank contents onto the ground surface, and in some instances pumping direct into the street water table, a house to house survey was made in the area.

The undesirable situation found to exist was precipitated by unusually heavy rain over a short period in a low-lying area in which the sub-soil water is high at all times. It became obvious that a better way to deal with the situation was to install impervious pumping chambers and pump treated effluent only onto the ground surface. This will be necessary until the area is sewerred, whenever a similar situation recurs.

(h) SUPERVISION OF FOOD AND DRUGS

Supervision—The Food and Drugs Act requires the Central Board of Health and local and county boards of health to ensure that food and drugs are sold “in a pure and genuine condition”.

For this purpose, officers of the Department and of local and county boards are appointed inspectors under the Food and Drugs Act.

Places where food and drugs are manufactured, produced or prepared for sale are inspected at intervals to ensure that the standards of cleanliness and quality are maintained.

Analysis of Food and Drugs—The Food and Drugs Act provides for the taking of samples of food and drugs offered or exposed for sale to determine whether they conform to prescribed standards.

It should be noted that the main responsibility for routine food sampling in the metropolitan area rests with the Metropolitan County Board. Among the many thousands of samples taken by officers of the Metropolitan County Board and the Department during 1963, there were cases where analysis was considered necessary and the results of these analyses and the subsequent actions taken are set out in Table 5.

TABLE 5—FOOD ANALYSES, 1963

Article Sold As	No.	Results of Analysis	Action Taken
Bacon	1	Conformed with Regulations	—
Brandy	2	Adulterated	Prosecuted
Bread	8	4 deficient in fat or sugar	Warned
Butter	3	2 deficient in milk fat	Prosecuted
Cheese	4	Conformed with Regulations	—
Confectionary	2	Conformed with Regulations	—
Cream	5	4 not in compliance with Regulations	{ 2 prosecutions pending 2 no action Trial samples 7 prosecuted 4 warned 1 no action
Edible oil	19	12 failed to conform with Standards	{ 2 prosecuted 14 warned 1 no action
Fish—fresh	7	Conformed with Regulations	—
tinned	9	Conformed with Regulations	—
Fritz	4	1 deficient in meat	Prosecution pending
Jam	1	Conformed with Regulations	—
Milk, fresh	820	17 deficient in fat or solids	{ 2 prosecuted 14 warned 1 no action
Milk, powdered	1	Conformed with Regulations	—
Mince meat	54	9 contained excessive preservative	{ 1 prosecuted 1 warned 5 prosecutions pending 2 no action
Sausages	1	Conformed with Regulations	—
Sherry	1	Conformed with Regulations	—
Summer or temperance drinks .	8	1 contained excess saccharin	Warned
Vegetables	2	Conformed with Regulations	—
Vodka	1	Not in compliance with Regulations	Warned
Whisky	6	4 labelling misrepresentation.....	{ 1 prosecuted 1 warned 2 prosecution pending
Wine	6	1 labelling misrepresentation.....	Prosecuted

Supervision of Wines and Spirits—A total of 7,651 samples of wines and spirits were tested in 361 licensed premises during 1963. These premises included hotels, wine saloons and stores in metropolitan and country areas.

Samples which were shown to be not of the required standard were obtained from 11 premises.

The Central Board of Health authorized legal proceedings under the Food and Drugs Act against four of the licensees concerned and issued warnings to the remainder.

City of Woodville—During the year the Local Board of Health for the City of Woodville petitioned the Governor for its area to be removed from the area of the Metropolitan County Board. The petition was successful and secession was proclaimed by the Governor in April 1963.

Reconstituted Milk—Food and Drugs Regulation No. 45 provides for the issue by the Central Board of Health of permits to reconstitute milk in South Australia.

As in previous years some milk producers had seasonal difficulty in maintaining the standard of milk required by the Food and Drugs Regulations.

The policy of the Central Board of Health is to issue permits to reconstitute this substandard milk by the addition of skim milk powder only. The Central Board may, for limited periods, also permit this reconstituted milk, which must be pasteurized, to be labelled and sold as “Pasteurized Milk”.

Four companies were given permits by the Central Board of Health during 1963 to add skim milk powder to milk, to label the product “Pasteurized Milk”, and sell it as such. Before permits were granted manufacturers’ premises and equipment to be used in the reconstitution of milk were inspected and in each case considered to be suitable by officers of the Department.

Thickened Cream—Following representations from local distributors, the regulations were amended to provide for the sale of thickened cream. It had been stated that local cream was being sold at a disadvantage when compared with interstate cream which was allegedly thickened.

Desiccated Coconut—During the year, 59 samples of imported desiccated coconut from 3,070 containers were investigated bacteriologically. As no pathogens were detected in these or in any previous samples taken after April 1962, routine sampling was discontinued in June 1963.

Sampling of imported desiccated coconut was commenced in July 1960. Since then, a total of 1,966 samples from 25,298 containers were investigated, and desiccated coconut from 1,071 containers was destroyed following detection of pathogens in samples.

Meat—Imports of boneless buffalo meat from the Northern Territory were continued throughout the year. The meat, which is transported by air freight or refrigerated semi-trailer vans, is accompanied by a certificate of inspection from the Animal Industry Branch of the Northern Territory Administration.

During 1963, 72,000 pounds of certified boneless buffalo meat were brought into the metropolitan area and 6,920 pounds of uncertified buffalo meat were imported into the State.

Poultry—During March 1963, a survey was carried out of all the known larger poultry dressing establishments in the metropolitan area and near-country districts.

The results of the survey indicated that supervision in this industry was inadequate. Overseas experience has shown that improperly handled poultry can be a vehicle of salmonella infection.

Probably the most important recommendation made following the survey was that a regular inspection service of all poultry is warranted.

Drugs—Regulations were introduced during the year requiring that all eye drops and eye lotions should be sterile and effectively sealed. This legislation follows work carried out in South Australia by an ophthalmologist in conjunction with the Institute of Medical and Veterinary Science. The provisions have been well received by the medical and pharmaceutical professions.

Uniform standards—Further progress was made with the adoption of uniform food standards recommended by the National Health and Medical Research Council. They included standards for food additives, modifying agents, jelly crystals, food colours and the labelling of margarine. The uniform standard for meat and meat products was disallowed in Parliament following representations regarding the use of sulphur dioxide in mince meat.

Control of New Drugs—Proposals are being considered by which new drugs shall not be sold until they have been submitted for inspection and analyses. These proposals follow the world-wide trend for a close scrutiny of all new drugs before they are released to the public.

Poisons—New Poison Regulations based on the uniform Schedules recommended by the National Health and Medical Research Council came into force and have operated successfully.

(i) SUPERVISION OF OCCUPATIONAL HEALTH

Investigation of Hazards of a Chemical Nature—During the year the scope of investigations undertaken has been wider because of the appointment of a chemist, Mr. G. Sweetapple, as Scientific Officer.

The work carried out was broadly divided into routine investigation of hazards to health in industry, and investigation of complaints and requests for information. Of the 21 complaints and requests investigated, 5 were received from trade unions, 6 from the Department of Labour and Industry, 3 from the Stevedoring Authority, 4 from other Government Departments, 2 from medical practitioners and one from an anonymous factory worker. These were in reference to the use of chromates in radiator water, hazards associated with electroplating, sandblasting, asbestos spraying and the effects of exposure to hydrogen sulphide, dust from polystyrene cutting, asbestos dust, silica dust, dust produced during the printing of newspapers, dust from the packaging of pesticides, excessive noise, ethyl acetate, cyanide, creosote, lead in cooking utensils, ammonia, toluol, trichlorethylene and coal gas.

In addition, advice was given following enquiries about such items as dust from handling varieties of timber in industry, respiratory protective devices, and air pollution.

Inspections were made at all known premises in the State where timber is impregnated with a water-borne copper-chrome-arsenate preservative, known either as "Tanalith C" or "Celcure".

Because of the constituent chemicals involved, namely copper sulphate 35 per cent, potassium dichromate 45 per cent, and arsenic pentoxide 20 per cent, it was found necessary to make recommendations regarding the handling of the product.

Work of an investigational nature comprised the inspection of 111 printing shops in the Adelaide metropolitan area. It was found that very few printing shops set their own type. This is mainly being carried out by a larger printer or trade house. Sampling was carried out at seven of the larger printers and conditions were generally found to be satisfactory.

Twenty battery makers and repairers were inspected and five were investigated by sampling. Unsatisfactory conditions were found at two of these. Sampling was also carried out at the premises of one solder manufacturer and conditions found to be satisfactory.

In addition to dust counting and detector tube work, 220 samples were taken and forwarded to the Institute of Medical and Veterinary Science (9) and the Department of Chemistry (211) for examination.

Equipment Purchased During the Year 1963—Various accessories were purchased to enable the Greenburg-Smith Impinger to be more versatile and convenient when used.

Two gas meters were purchased. One was a special test meter for calibration of air flow instruments, the other is required for metering air to be used in sulphur dioxide apparatus for atmospheric air pollution studies.

Ionising Radiation—The major use of ionising radiation continues to be in the field of medical and dental radiography, but industrial use is increasing. Many medical and most dental X-ray units are now registered with this Department, and their users licensed as required by the Radio-active Substances and Irradiating Apparatus Regulations under the Health Act. All users have not, as yet, applied for licences or registration of machines.

Use of radio-isotopes in industry and medicine continues to grow steadily in South Australia.

Sealed sources are currently being used for industrial radiography, measurement and control of thickness and flow of materials, determination of soil moisture and density and in therapy. Research organizations are using small but increasing amounts of a wide range of unsealed isotopes. Larger amounts have been used to determine cable leaks and water flow rates.

There are now 9 industrial, 11 scientific and 6 medical organizations, employing a total of 113 people, who are licensed to use radio-isotopes in South Australia.

Activities—A summary of the relevant Regulations has been prepared and forwarded to all known users of irradiating apparatus, along with details of the film badge service, approved by the Director-General of Public Health for monitoring exposure to ionizing radiation.

Over 100 investigations have been carried out in places where radio-active substances and irradiating apparatus are known to be in use for industrial or research purposes. These investigations have covered all applications for licences from non-medical or dental users. The possibility of checking radiation safety features of dental units by a rapid film pack technique which will enable a substantial saving of the dentist's professional time is being investigated.

Assistance and advice has been given to a number of existing or potential radio-isotope users, in such matters as storage facilities, monitoring and safety precautions necessary in handling, transporting, labelling and disposing of waste, and in the use of radio-isotopes for teaching in technical and high schools. A list of radio-isotope users and radiation safety officers has been supplied to the Chief Fire Officer for use in the event of fire in a building where radio-active material is used and stored.

Licences—Applications received and licences granted are shown below:

Types of Application	Granted to 31/12/63
To import and sell radio-active substances	6
To use radio-active substances	113
To import and sell irradiating apparatus	2
To use irradiating apparatus (total)	410
To register irradiating apparatus (1st unit)	210
(additional unit)	100

Monitoring—A film badge monitoring service, approved by the Director-General of Public Health and provided by the Commonwealth X-ray and Radium Laboratory, Melbourne, is now available to users in South Australia. Commencing last April, it now caters for about 800 people in this State in 164 centres.

In the vast majority of cases, dosages recorded to date are well below permissible levels. Unsatisfactory levels are investigated and where necessary appropriate recommendations made.

A number of objects, including luminous watches, toys, clothing items (caps and linings), switches and dials, have been examined at the request of members of the public for emission of ionizing radiation. This has been found absent in toys and clothing items examined to date, and usually of a low order for luminous watches and dials.

A preliminary check on stray radiation around X-ray rooms in a number of country hospitals has been made by positioning film badges on the surrounding walls.

Medical examinations—Medical examinations of applicants for permanent appointment to the South Australian Public Service and to become subscribers to the South Australian Superannuation Fund were carried out by medical officers of the Public Health Supervision Branch. A total of 621 people were examined and medical reports of a further 100 examined by medical practitioners elsewhere in the State were also checked.

In addition, 19 officers of the Department of Mines were examined for medical fitness to carry out surveys in areas of the State where medical attention is not readily available. Thirty-four applicants for loans from the Housing Loans Redemption Fund, who gave significant medical histories, were also examined.

These medical examinations provide part of an occupational health service for the Government and its employees.

Interstate Meetings and Conferences—During the year, Dr. G. H. McQueen, Principal Medical Officer, attended meetings of the Occupational Health Committee of the National Health and Medical Research Council in Melbourne and Sydney, and a meeting of the Radiation Technical and Policy Subcommittee of the Occupational Health Committee in Melbourne.

In April, Mr. G. F. Sweetapple, Scientific Officer, attended a Clean Air Conference in Sydney. Modern methods of analysis of air pollutants including sulphur dioxide, automatic recorders, measurement of polycyclic hydrocarbons, filter media and legislation were the main items discussed.

Immediately afterwards, a Scientific Officers' Conference in Melbourne was also attended by Mr. Sweetapple. Problems considered at this conference included methods of detecting toxic substances in the factory environment, gas chromatography and respiratory protective devices. A visit was also made to the Defence Standards Laboratories.

Mr. A. S. Wilson attended a conference on Radiation Protection at the Commonwealth X-ray and Radium Laboratory, Melbourne, in March 1963. Topics discussed included:

maximum permissible doses and concentrations,
personnel monitoring for—

- (a) exposure to external ionizing radiation,
 - (i) with film badges and
 - (ii) non-photographic devices,
- (b) contamination—
 - (i) internal,
 - (ii) hands, clothing, etc.,

radiation protective problems—

- (a) with apparatus generating X-rays,
- (b) with sealed radio-active sources, and
- (c) with unsealed radio-active sources (medical, research and industrial),

radio-active waste disposal,

technical (non-medical) aspects of management of accidents and incidents involving possible exposure to radiation and radio-active substances.

(j) HEALTH EDUCATION

A large part of the health education work of the Department is done by officers of the Public Health Supervision Branch. During the year, this included talks to food handlers at Woomera, Rotary Clubs at Prospect and Woodville, primary school children at Port Pirie, and several metropolitan local boards of health. Films and slides were used on many occasions to further enhance the value of these talks.

The Department provided an exhibit at the Royal Adelaide Exhibition in March. This was made up in three sections—protection of food from contamination, dental health and tuberculosis services. The exhibit was awarded a Bronze Medal by the South Australian Chamber of Manufactures Incorporated.

News Letters and “Good Health”—Monthly news letters, prepared by the Principal Medical Officer, and the quarterly magazine *Good Health*, issued by the Department, were again used as a means of disseminating information on public health matters.

Reference was made in each news letter to one or two items of current public health interest. A list of diseases reported to the Central Board and Local Boards of Health each month was also given.

Items of interest referred to in newsletters and circulars during the year included trachoma, enteric infections, smallpox and smallpox vaccination, immunization, reconstituted milk, comparison of incidence rates of selected diseases in Australia, early notification of births, additions to the list of glass and dish-washing machines approved by the Central Board, proposed quarterly meetings of health and food inspectors and the Central Board’s policy on connection to the sewer when a septic tank is installed on the premises.

Royal Society of Health—Examinations for diplomas and certificates of the Royal Society of Health were conducted by the Society’s Board of Examiners in South Australia.

Courses were conducted by the Adult Evening Class Section and the Technical Correspondence School of the Education Department.

Material for the courses was prepared and corrected by the Chief Inspector and Senior Inspector.

Practical work required by the Royal Society of Health for its diplomas and certificates was arranged by officers of the Branch.

At the last examinations of the Royal Society of Health in Adelaide, 35 candidates sat for the Diploma of the Royal Society, and 4 sat for the Meat and Other Foods Certificate. Of these, 31 obtained the Diploma and 4 the Certificate.

3. SCHOOL HEALTH SERVICES

The professional staff at the end of 1963 consisted of the Principal Medical Officer, eight full-time medical officers, two part-time medical officers (four days per week), one senior dentist, ten dentists, eleven nurses, eleven dental assistants, one audiologist (nine-tenths time), one consultant audiologist (one-tenth time), and two audiometrists. One full-time medical officer retired during the year but continued duty on a part-time basis and one medical officer transferred from the Mental Health Services for the last three months of the year.

At the beginning of the year, Dr. D. J. Daly, who had rendered very valuable service, was replaced by Dr. M. Robinson, who lived at Clare, 80 miles north of Adelaide. It was decided to base her at Clare and cover all country schools due for examination within a 40-mile radius. She therefore did no metropolitan work at all, and this has greatly helped the programme in country schools. A comparison of metropolitan and country figures shows—

	1962		1963	
	Metropolitan	Country	Metropolitan	Country
Schools visited	106	152	128	205
Children Examined	50,528	18,565	50,036	27,907

Serious consideration must be given in the future to decentralization at least for some of the larger country centres.

The Health Service provided for Student Teachers, Teachers and other personnel continues to expand. The figures for these examinations depend on the date of clearance and, as the bulk of these medical examinations are done in September and January, delay in clearance may affect the totals for any one year. The figure for 1962 of 3,711 is loaded with a backlog of medicals done in 1961 and only cleared under the new system introduced in 1962. The figures for 1963 are more realistic as delays in clearances have been greatly reduced.

MEDICAL SERVICES

The number of children examined in State schools was 77,943 in 1963. This figure included 77,435 children seen in schools by medical officers of the School Health Services and 508 children seen by local doctors in Eyre Peninsula schools acting on behalf of this section. The school enrolment in 1963 was 189,923. To achieve the aim of an examination for each child every three years it is necessary to see at least one-third of the total enrolment each year. In 1963, this figure of one-third has been exceeded. Medical officers of the Department visited 333 schools during the year and Eyre Peninsula doctors visited five schools.

The parents of 32 children refused to consent to medical examinations.

The following table (Table 6) shows the number of schools visited, children examined and defects observed by medical officers of the School Health Services—

TABLE 6

	Metropolitan	Country	Total
Schools visited.....	128	205	333
Children examined	50,036	27,907	77,943
Defects found—			
Vision (excluding spectacles).....	3,594	2,102	5,696
Wearing spectacles	3,682	1,384	5,066
Hearing	1,539	848	2,387
Nose and Throat	614	478	1,092
Teeth (excluding children under dental treatment)	6,589	5,118	11,707
Heart	219	149	368
Skin.....	876	480	1,356
Lungs	137	67	204
Epilepsy	54	46	100
Allergies	2,821	1,368	4,189
Other conditions, including leg deformities, cerumen, colour blindness and enuresis	5,426	2,969	8,395
Total defects recorded	25,551	15,009	40,560

TABLE 6A—A COMPARISON OF THE PAST THREE YEARS

	1961	1962	1963
Schools visited.....	252	258	333
Children examined	68,071	69,093	77,943
Defects found—			
Vision (excluding spectacles).....	3,884	4,243	5,696
Wearing spectacles	3,669	4,512	5,066
Hearing	1,916	1,453	2,387
Nose and throat	809	778	1,092
Teeth (excluding children under dental treatment)	13,004	11,642	11,707
Heart	346	357	368
Skin.....	1,498	1,272	1,356
Lungs	139	175	204
Epilepsy	78	75	100
Allergies	3,232	2,750	4,189
Other conditions, including leg deformities, cerumen, colour blindness and enuresis.....	10,740	7,009	8,395
Total defects recorded	39,315	34,271	40,560

To enable comparisons to be made with other years, Table 7 shows, for the last seven years, the rates per 10,000 children examined of certain defects formally notified to parents.

TABLE 7—DEFECTS NOTICED PER 10,000 CHILDREN EXAMINED

Year	Vision	Hearing	Nose and Throat	Teeth	Heart	Allergies	Epilepsy
1957.....	622	180	231	3,009	48	315	5
1958.....	605	213	166	2,444	61	321	10
1959.....	776	140	146	2,092	60	364	12
1960.....	706	233	104	2,059	57	476	11
1961.....	571	282	119	1,912	51	475	11
1962.....	615	211	113	1,687	52	398	11
1963.....	730	306	140	1,500	47	537	13

Notices were sent to the parents of 11,707 children needing dental attention. Children already under private dental supervision and children who were examined by departmental dentists are not included in this figure.

Eyre Peninsula Scheme—Doctors residing at two centres on Eyre Peninsula assisted the School Health Services by examining children attending schools in their areas. Five hundred and eight children attending five schools were examined.

TABLE 8—EYRE PENINSULA SCHEME

Schools visited	5
Children examined.....	508
Defects formally notified—	
Vision (excluding spectacles)	42
Wearing spectacles.....	6
Hearing	4
Nose and throat	8
Teeth	66
Heart	1
Skin	2
Lungs	—
Allergies	—
Epilepsy	—
Other conditions (not classified)	27
	156

Examinations carried out by School Health Services staff at 169 Rundle Street, Adelaide—

- (1) *Medical Examinations of School Children seen at School*—Children may be asked to attend head office for further assessment of a particular defect before being referred on to their family doctor, hospital or eye specialist. Teachers and parents occasionally bring children to head office for advice and assessment of a particular problem. During 1963, 208 children were seen for visual assessment and 11 children seen for cardiac assessment (including electrocardiograms).
- (2) *Medical Examinations Apart from School Children*—2,014 students entering or leaving the Teachers Colleges, or applying for Leaving and Leaving Honours Teaching Scholarships, Junior Teaching positions, and Laboratory Assistantships were medically examined in 1963. Teachers referred by the Education Department were seen before returning to duty from sick leave. All applications from teachers for invalidity pensions were considered and, where necessary, the applicants were examined. Direct entrants to the service and teachers applying for superannuation were also examined. A total of 471 teachers were seen during 1963. Forty children travelling interstate with cricket, basketball and football teams were medically examined. Examinations were also undertaken for 66 female public servants seeking permanent appointment or superannuation. Total examinations were 2,591.

Health Lectures—Dr. C. O. Fuller continued lecturing at Wattle Park Teachers College and gave six lectures weekly for the full academic year. In the third term, Dr. Fuller and Dr. Patricia Sprod gave a short series of lectures at the Adelaide Teachers College and Western Teachers College respectively. Examinations were set and marked by the two officers. Dr. Fuller was also re-appointed to the Nurses lecture panel at the Royal Adelaide Hospital and the Adelaide Children’s Hospital for a further term of three years.

Paediatric Refresher Week—Five medical officers attended the course which was held at the Adelaide Children’s Hospital. Dr. C. O. Fuller read a paper on the School Health Services at one of the sessions.

Mothers’ Clubs—There were a number of requests for speakers at Mothers’ Clubs and School Welfare Clubs. Twelve Clubs were addressed by medical officers and dentists of the Branch.

Follow-up Work—This was continued by the School Nurse detailed for this work who was assisted from time to time by the Senior Nurse.

Sixty-eight metropolitan schools were visited once. None of these schools were visited a second time. No home visits were made.

68 schools were visited.

2,460 children had received attention.

583 children had received no attention.

Defect Notices—Under an arrangement approved by the Australian Medical Association 3,113 forms S.H.S.5 were returned by doctors and specialists to whom children were taken by parents. Their co-operation is gratefully acknowledged as it enables this section to complete records and follow the progress of these children.

S.H.S.5 Forms returned—Metropolitan 1,994

Country ... 1,119

Audiometric Testing—Audiometric testing was conducted in State and Private schools and pre-school kindergartens associated with the Kindergarten Union of South Australia Incorporated. A total of 82,377 children had pure tone audiometer tests. These tests were carried out by medical officers, audiometristes and school nurses. Of the children tested, 2,948 were found to have some hearing loss at the time of testing. Parents were notified accordingly and arrangements were made, where possible, for further tests by the Deafness Guidance Clinic in the sound-proof room. Statistics of these audiometric tests are shown in Table 9. These figures are independent of Table 6.

TABLE 9—AUDIOMETRIC TESTING

METROPOLITAN

	No. of Schools	Tests			Defects		
		Males	Females	Total	Males	Females	Total
Pre-schools.....	37	851	859	1,710	38	26	64
Primary schools	122	21,417	19,605	41,022	938	655	1,593
Secondary schools	52	7,174	5,667	12,841	216	136	352
Private schools	2	124	431	555	14	17	31
Totals	213	29,566	26,562	56,128	1,206	834	2,040

COUNTRY

	No. of Schools	Tests			Defects		
		Males	Females	Total	Males	Females	Total
Pre-schools.....	—	—	—	—	—	—	—
Primary schools	147	8,970	8,441	17,411	358	274	632
Area schools	11	1,898	1,743	3,641	74	56	130
Secondary schools	18	2,695	2,502	5,197	92	54	146
Private schools	—	—	—	—	—	—	—
Totals	176	13,563	12,686	26,249	524	384	908
Grand Totals..	389	43,129	39,248	82,377	1,730	1,218	2,948

Infections in School Children—The numbers of communicable diseases reported to teachers in State Schools are shown in Table 10.

TABLE 10

Year	Diphtheria	Scarlet Fever	Measles	Rubella	Whooping Cough	Chicken Pox	Mumps	Polio- myelitis	Infective Hepatitis	Other Conditions
COMMUNICABLE DISEASES										
1959	2	154	943	110	39	1,948	2,374	—	110	106
1960	—	163	3,707	68	117	1,588	2,436	—	387	85
1961	1	130	766	67	51	2,438	461	1	359	113
1962	—	171	4,494	686	91	1,804	962	2	107	49
1963	—	172	1,444	826	218	2,607	4,750	—	59	99
COMMUNICABLE DISEASES PER 10,000 CHILDREN ENROLLED										
1959	0.1	9.4	58.0	6.7	2.4	119.9	146.2	—	6.7	6.5
1960	—	9.5	218.0	4.0	6.9	93.4	143.2	—	22.6	4.9
1961	—	7.4	43.2	3.7	2.9	137.7	26.0	—	20.3	6.4
1962	—	9.3	244.0	37.3	4.9	98.0	52.3	—	5.8	2.7
1963	—	9.1	73.9	43.5	11.5	137.2	250.0	—	3.1	5.2

The total number of these communicable diseases reported was 10,175.

DEAFNESS GUIDANCE CLINIC

The Deafness Guidance Clinic completed its sixth year with a total of 1,949 attendances.

New cases were referred from the following sources—

	Per Cent
Officers of the School Health Services	80.6
Family Doctors	10.4
Parents	4.0
Others (Kindergarten Union, Teachers, Psychology Branch and others) ..	5.0

The liaison with the Education Department through the Advisory Panel for Deaf and Hard-of-Hearing Children has been maintained.

The monthly lists of all children discovered to have a significant loss have been continued and 291 were made the subject of specific letters. Of these 180 were discovered at the initial test.

In addition to children seen, tests were carried out on student teachers, scholarship applicants and public servants.

TABLE 11—ATTENDANCES AT THE DEAFNESS GUIDANCE CLINIC

NEW CASES

	Male	Female	Total
Pre-school—			
Metropolitan	14	13	27
Country	1	5	6
Primary School—			
Metropolitan	435	308	743
Country	111	89	200
Secondary School—			
Metropolitan	73	51	124
Country	19	10	29
Government Departments and others	22	17	39
Totals	675	493	1,168

RETESTS

	Male	Female	Total
Pre-school—			
Metropolitan	7	3	10
Country	1	—	1
Primary School—			
Metropolitan	314	228	542
Country	49	47	96
Secondary School—			
Metropolitan	62	49	111
Country	7	8	15
Government Departments	5	1	6
Totals	445	336	781

Following attendance at the Clinic, patients are either referred to family doctors, specialists or hospitals; or discharged as having no significant hearing loss, or requested to return for further testing before final assessment.

TABLE 12—DISPOSAL

NEW CASES		RETESTS	
Referred to family doctor	482	Referred to family doctors	256
Referred to specialists or hospitals	116	Referred to specialists or hospitals	96
Returning for further testing	243	Returning for further testing	244
Discharged	327	Discharged	185

DENTAL SECTION

The year began with eleven dentists on strength but this number was reduced to ten on the resignation of Mr. Wan who was not replaced until early in July. Our services were then continued in the Ceduna area by Mr. Yong.

Areas treated, or part treated, during the year were those centred upon—

Ceduna	Riverton
Wudinna	Kingscote
Kimba	Yankalilla
Leigh Creek	Lucindale
Booleroo Centre	Pinnaroo

Schools treated in 1962 were treated again in 1963 with the exception of some schools in Booleroo Centre, Riverton, Kingscote and Pinnaroo areas. Work in the Cambrai areas was discontinued when a private practitioner began practice in Gumeracha and Mount Pleasant. Eleven schools in the Booleroo Centre area remained untreated because of a change in the Dental Officer assigned to the area. Four schools in the Riverton area remained untreated because of increases in the number of children in the schools treated and an unusual turnover in children in Jamestown Primary School. Kingscote and Pinnaroo areas have two large schools in each. This arrangement has precluded the possibility of finishing more than one school in a year, hence each school has been treated at two-yearly intervals. This situation can be expected to improve as the backlog of work is overtaken in these areas.

The number of students in training at the Dental School was increased from 12 to 14.

SUMMARY OF WORK FOR THE YEAR

In Country Schools—

Children examined	9,471
Children offered treatment	5,325
Children accepting treatment	4,157
Fillings inserted	19,972
Extractions	3,240
Other treatments	5,822
Number of visits for treatment	14,953
Number of schools visited	71

The overall treatment acceptance figure dropped from 83·1 per cent to 78·1 per cent due almost entirely to a drop in one area.

Average treatments required overall were—

Fillings	4·8 per child
Extractions	0·8 per child
Other	1·4 per child

Average fillings per child increased from 3·8 to 4·8 per child when compared with 1962 figures. The filling : extraction ratio rose from 5·8 : 1 in 1962 to 6 : 1 in 1963.

In Children's Welfare Institutions—Work was continued in Children's Welfare Institutions during school holidays when emphasis was placed on treatment of conditions requiring prompt attention rather than a complete treatment for individual patients.

Fillings inserted	701
Extractions	180
Other treatments	194
Number of institutions visited	6

Surveys—The dental health of children in schools in towns where a resident dentist practised, was compared with those in schools treated six months earlier by school dentists.

The survey showed similar amounts of dental caries in the two groups, but that a higher proportion of this had been dealt with in the children attending schools where the School Dental Service operates.

Many reasons have been suggested to explain why parents do not ensure that dental disease in their children is treated when dental services are available. Two of the important ones appear to be apathy and the economic burden in the absence of any dental health benefits scheme.

4. POLIOMYELITIS BRANCH

Incidence—During the year ended 31st December, 1963, eleven cases were reported. The yearly cases reported since the last epidemic started in May 1949 appear in Table 13.

TABLE 13—REPORTED CASES OF POLIOMYELITIS IN SOUTH AUSTRALIA, 1949-1963

Year	Cases			Deaths		
	Metropolitan Area	Other Districts	Total	Metropolitan Area	Other Districts	Total
1949	490	90	580	15	5	20
1950	816	157	973	7	10	17
1951	1,012	479	1,491	39	23	62
1952	435	274	709	7	5	12
1953	287	111	398	11	10	21
1954	123	53	176	2	3	5
1955	110	72	182	5	1	6
1956(a)	58	64	122	2	1	3
1957	5	11	16	1	—	1
1958	5	5	10	1	1	2
1959	1	—	1	—	—	—
1960	9	3	12	—	—	—
1961	33	11	44	3	—	3
1962	10	9	19	1	1	2
1963	7	4	11	—	1	1

(a) The Salk immunization programme started in South Australia on 28th June, 1956. Table 16 shows the number of reported cases accepted as poliomyelitis since that date.

(NOTE—A case “reported” does not necessarily mean that it was confirmed as poliomyelitis. The number of cases accepted for statistical purposes, after full investigation, is shown in Table 16.)

Of the eleven cases of suspected poliomyelitis reported during 1963, nine were considered to be suffering from poliomyelitis; details of these eleven reported cases are shown in Table 14.

TABLE 14—DETAILS OF ELEVEN SUSPECTED CASES REPORTED IN YEAR ENDING 31st DECEMBER, 1963

Case No.	Age	Sex	Specimens Available	Virus Isolated	Muscle Paralysis	No. of Salk Injections
REGARDED AS POLIOMYELITIS						
1	29 years	Male	—	Type 1 (autopsy)	Yes	—
2	7 years	Male	Yes	Type 1.....	Yes	—
3	12 years	Male	Yes	Type 1.....	Yes	—
4	1.1 years	Female	Yes	Type 1.....	Yes	—
5	4.11 years	Male	Yes	Type 1.....	Yes	—
6	26 years	Female	Yes	—	Yes	—
7	10 months	Male	Yes	—	Yes	—
8	11 months	Female	Yes	Type 1.....	Yes	—
9	53 years	Female	Yes	—	Yes	—
NOT REGARDED AS POLIOMYELITIS						
1	5.8 years	Male	Yes	—	—	1
2	20 years	Male	Yes	—	—	—

Case 1 was fatal: an adult patient who had received no poliomyelitis immunization injections.

Virus Isolations—It will be seen from the above table (14) that the six poliovirus isolations during 1963 were Type 1. Table 15 sets out the types of poliovirus isolated in South Australia since 1956.

TABLE 15—NUMBER OF ISOLATIONS OF EACH TYPE OF POLIOVIRUS FROM SOUTH AUSTRALIAN SPECIMENS FROM 1956-1963

Year Ending	Poliovirus Type 1	Poliovirus Type 2	Poliovirus Type 3
31st December, 1956	3	2	18
31st December, 1957	3	—	4
31st December, 1958	—	—	—
31st December, 1959	1	—	—
31st December, 1960	15	—	—
31st December, 1961	1	—	35
31st December, 1962	8	—	2
31st December, 1963	6	—	—

Investigation and determination of cases—Since the start of the Salk programme on 28th June, 1956, reports of suspected cases have been investigated, as far as possible, by the Principal Medical Officer (Poliomyelitis) and details have been sent to the Commonwealth Surveillance Committee which meets in Melbourne. The members of this specialist committee make the final decision on whether a case should be regarded as poliomyelitis or not, in assessing statistically the efficacy of the “Salk” vaccine. From 28th June, 1956, to 31st December, 1963, details of two hundred and eleven reported cases of suspected poliomyelitis were referred to the Committee; 150 of these cases were accepted as poliomyelitis.

Of the 150 poliomyelitis patients, 13 only (all within the age group 0-14 years) had started a course of immunization injections. None of these patients had received three “Salk” immunization injections.

Of the 137 cases of poliomyelitis in patients who had received no injections, 74 were children in the age group 0-14 years; and 63 were persons over 15 years of age.

This means that in South Australia between 28th June, 1956, and 31st December, 1963, there have been 137 accepted cases of poliomyelitis in NON-immunized persons, 13 cases in partly immunized persons, and none in persons who had received three injections.

Table 16 shows these decisions, of the Surveillance Committee, on South Australian cases from 28th June, 1956, to 31st December, 1963.

TABLE 16—RESULTS OF CASES DETERMINED BY SURVEILLANCE COMMITTEE IN THE PERIOD 28TH JUNE, 1956, TO 31ST DECEMBER, 1963 (BASED ON DATE OF ONSET OF ILLNESS AND NOT DATE OF NOTIFICATION)

Period	Total Cases Considered by Committee	Not Poliomyelitis		Poliomyelitis							
		0-14 Years	Over 15 Years	0-14 Years				Over 15 Years			
				No. of Injections Received				No. of Injections Received			
				0	1	2	3	0	1	2	3
Six months ending 31st December, 1956.....	58	7	3	26	3(a)	—	—	19	—	—	—
Year ending 31st December, 1957 ..	33	9	6	3	1(b)	1(c)	—	13	—	—	—
Year ending 31st December, 1958 ..	31	13	15	1	—	—	—	2	—	—	—
Year ending 31st December, 1959 ..	3	1	—	2	—	—	—	—	—	—	—
Year ending 31st December, 1960 ..	10	1	1	7	1(d)	—	—	—	—	—	—
Year ending 31st December, 1961 ..	46	1	—	21	3(e)	2(f)	—	19	—	—	—
Year ending 31st December, 1962 ..	19	1	1	8	2(g)	—	—	7	—	—	—
Year ending 31st December, 1963 ..	11	1	1	6	—	—	—	3	—	—	—
	211	34	27	74	10	3	—	63	—	—	—

NOTE—1956 (a) These three patients, who were reported during the six months ending 31st December, 1956, developed poliomyelitis within a week of attending for their first injection; all three had been sick prior to the injection. The investigations showed that each of these children was infected with poliomyelitis before the first injection was given and it could not be expected that the vaccine would prevent development of the disease in these circumstances. These three patients really should be regarded as NON-immunized subjects.

1957 (b) This child received one injection only. As no specimens for laboratory investigation were made available, it was not possible to confirm, or exclude, the diagnosis of poliomyelitis. It was decided to accept the case as poliomyelitis for statistical purposes.

1957 (c) This child of six years had received two injections. Again no specimens could be obtained and the diagnosis of poliomyelitis, whilst not proved, was accepted.

1960 (d) This three-year-old girl received one injection a year before her illness and had not attended for her second and third injections when they were due.

1961 (e) These three children, aged 1.3 years, 2.8 years, and 2.8 years, who contracted poliomyelitis in 1961, had each received one injection only; this first injection was received seven months, twelve months, and sixteen months respectively, before the illness.

1961 (f) These children aged 9 months, and 9 years, also contracted poliomyelitis in 1961 before completing their immunization. The 9-months-old child received a first injection two months, and a second injection one month, before her illness; the 9-years-old child received a first injection twenty-one months, and a second injection eighteen months, before his illness.

1962 (g) On the day the first child was unwell, he was taken for his first poliomyelitis immunization injection; it was not to be expected that this injection could in any way have helped him. The other child was said to have possibly received one injection a long time ago in New South Wales; no record card was available, and a medical practitioner relation of the child was doubtful whether an injection had been received or not.

Number of Fatal Cases—Of the 141 cases of poliomyelitis accepted by the Surveillance Committee, 7 were fatal. The years in which these occurred were as follows:

1956.....	1 death, 30 years of age.
1957.....	Nil
1958.....	Nil
1959.....	Nil
1960.....	Nil
1961.....	4 deaths. Ages 38, 26, 25, 28 years
1962.....	2 deaths. Ages 39, 29 years
1963.....	Nil

As was previously pointed out, the above Surveillance figures are based on the date of onset of the illness, and not on the date the case was reported.

Poliomyelitis Immunization Injections—The number of injections given from the start of the programme on 28th June, 1956, to 31st December, 1963, appears in Table 17.

TABLE 17—INJECTIONS GIVEN SINCE CAMPAIGN STARTED

28th June—31st December, 1956	223,979
1st January—31st December, 1957	401,683
1st January—31st December, 1958	266,164
1st January—31st December, 1959	306,463
1st January—31st December, 1960	156,165
1st January—31st December, 1961	33,263
1st January—31st December, 1962	189,035
1st January—31st December, 1963	171,519
	<hr/>
	1,748,271

- Note—
- (a)

The small number of injections given in the year ending 31st December, 1961 resulted from poliomyelitis vaccine not being available during most of the year—due to a prolonged production breakdown in the Commonwealth Serum Laboratories, Melbourne.
- (b)

The breakdown of this total number of 1,748,271 poliomyelitis injections into first, second, third and fourth injections, and in age groups is shown in Table 18.

TABLE 18—SEPARATION OF FIRST, SECOND, THIRD AND FOURTH POLIOMYELITIS INJECTIONS GIVEN FROM 28TH JUNE, 1956, TO 31st DECEMBER, 1963. (Note—THIS TABLE DOES NOT INCLUDE QUADRUPLE ANTIGEN INJECTIONS)

	0-14 Years	Over 15 Years	Total
First injections	349,499	240,037	589,536
Second injections	350,242	227,307	577,549
Third injections	318,452	187,459	505,911
Fourth injections	47,900	27,375	75,275
Total	1,066,093	682,178	1,748,271

The following table (Table 19) has been prepared to show the age group response trends each quarter over seven and a half years of immunization. It should be noted that the figures for the year 1961 do not reflect a response trend; they were determined by insufficient poliomyelitis vaccine being available during that year.

TABLE 19—POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN EACH QUARTER—IN AGE GROUPS—FROM 28TH JUNE, 1956, TO 31st DECEMBER, 1963

Quarter Ending—	Pre-school Age	School Age	15 Years and Over	Total
30th September, 1956	19,837	74,726	2,442	97,005
31st December, 1956	38,552	86,223	2,199	126,974
31st March, 1957	39,464	54,595	3,106	97,165
30th June, 1957	23,350	85,287	3,308	111,945
30th September, 1957	25,553	56,898	5,423	87,874
31st December, 1957	40,276	55,534	8,889	104,699
31st March, 1958	10,460	12,474	10,544	33,478
30th June, 1958	16,455	19,316	35,893	71,664
30th September, 1958	15,553	3,505	52,095	71,153
31st December, 1958	16,135	3,482	70,252	89,869
31st March, 1959	12,719	2,596	56,384	71,699
30th June, 1959	15,698	3,419	73,075	92,192
30th September, 1959	16,979	2,611	62,643	82,233
31st December, 1959	15,086	1,979	43,274	60,339
31st March, 1960	14,470	1,962	36,735	53,167
30th June, 1960	15,086	1,871	30,980	47,937
30th September, 1960	13,294	1,686	17,923	32,903
31st December, 1960	8,845	1,089	12,224	22,158
31st March, 1961	1,258	133	1,119	2,510
30th June, 1961	1	Nil	49	50
30th September, 1961	5,768	861	5,296	11,925
30th December, 1961	13,042	671	5,065	18,778
31st March, 1962	26,322	3,638	18,556	48,516
30th June, 1962	15,409	2,763	20,393	38,565
30th September, 1962	11,626	4,863	11,493	27,982
31st December, 1962	26,747	16,337	30,888	73,972
31st March, 1963	12,451	7,394	14,370	34,215
30th June, 1963	14,496	17,201	17,826	49,523
30th September, 1963	15,242	12,700	15,893	43,835
31st December, 1963	17,714	12,391	13,841	43,946
Total	517,888	548,205	682,178	1,748,271

The figures given in this report are those of poliomyelitis (“Salk” alone) injections. They do not include the 15,293 quadruple antigen injections given during the short time that this antigen was available. Details of quadruple injections given appeared in a previous Annual Report.

Up to 31st December, 1960, all poliomyelitis immunization injections were given by the Poliomyelitis Services staff. During late 1961, poliomyelitis vaccine was made available for the first time to other authorities, such as Local Boards of Health.

TABLE 20—POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN IN THE YEAR ENDING 31st DECEMBER, 1963, BY VARIOUS AGENCIES—IN APPLICANTS' YEARS OF BIRTH AND IN FIRST, SECOND, THIRD AND FOURTH INJECTIONS

Year of Birth	Poliomyelitis Services				Local Boards of Health				Hospitals and Other Authorities				Total			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
1963	258	173	1	1	3,811	2,322	125	13	46	14	5	4	4,115	2,509	131	18
1962	402	408	169	6	10,266	10,643	4,519	110	132	146	79	4	10,800	11,197	4,767	120
1961	90	94	294	86	1,449	1,885	6,263	1,696	19	27	124	29	1,558	2,006	6,681	1,811
1960	68	65	122	207	739	836	2,632	2,872	9	13	53	38	816	914	2,807	3,117
1959	52	50	69	185	622	677	1,696	3,068	9	14	37	57	683	741	1,802	3,310
1958	55	54	37	156	456	488	849	3,019	10	9	22	51	521	551	908	3,226
1957	34	38	40	128	502	516	654	3,714	6	9	27	59	542	563	721	3,901
1956	37	38	33	124	429	548	518	3,809	3	6	11	62	469	592	562	3,995
1955	33	33	23	140	354	457	397	3,741	4	4	12	48	391	494	432	3,929
1954	33	34	36	104	387	474	404	3,760	5	4	4	50	425	512	444	3,914
1953	25	27	19	108	351	446	368	3,736	—	2	4	43	376	475	391	3,887
1952	27	31	19	79	408	464	336	3,665	4	3	7	53	439	498	362	3,797
1951	25	26	27	88	277	355	254	3,439	1	—	5	32	303	381	286	3,559
1950	17	23	24	88	204	226	163	3,317	2	2	6	44	223	251	193	3,449
1949	23	36	19	85	158	175	92	3,095	4	3	4	30	185	214	115	3,210
1948	23	22	12	102	91	115	101	2,634	1	3	3	29	115	140	116	2,765
1947	22	21	12	99	76	85	91	2,028	—	2	3	21	98	108	106	2,148
1946	13	15	18	101	62	71	66	1,211	3	1	3	81	78	87	87	1,393
1945	23	23	5	83	26	27	45	586	14	16	14	456	63	66	64	1,125
1944	12	13	10	54	34	35	49	451	27	29	19	347	73	77	78	852
1943	11	13	11	48	54	51	78	428	36	44	14	246	101	108	103	722
1942	14	16	21	48	109	105	169	444	54	50	26	153	177	171	216	645
1941	24	33	42	45	209	209	312	459	58	47	36	70	291	289	390	574
1940	40	41	46	43	224	249	377	493	52	58	36	42	316	348	459	578
1939	34	33	42	55	242	239	404	602	49	49	33	50	325	321	479	707
1938	35	36	59	78	246	292	470	687	27	30	25	46	308	358	554	811
1937	30	34	58	75	283	279	487	771	26	27	33	42	339	340	578	888
1936	35	33	53	87	232	262	480	924	21	18	22	42	288	313	555	1,053
1935	35	30	47	69	221	243	389	895	18	16	21	24	274	289	457	988
1934	22	24	43	73	194	224	402	975	6	7	16	27	222	255	461	1,075
1933	18	18	37	78	200	205	408	950	9	9	17	37	227	232	462	1,065
1932	33	28	31	76	191	217	319	1,020	11	12	8	28	235	257	358	1,124
1931	24	25	39	74	158	193	362	983	12	16	21	27	194	234	422	1,084
1930	23	24	37	82	199	237	410	1,110	15	16	20	32	237	277	467	1,224
1929	31	31	34	76	149	193	342	1,133	14	12	19	30	194	236	395	1,239
1928	34	33	31	91	163	183	369	1,125	9	10	13	42	206	226	413	1,258
1927	17	22	40	73	157	172	346	1,082	10	8	6	23	184	202	392	1,178
1926	21	20	31	74	135	131	291	1,008	9	12	18	23	165	163	340	1,105
1925	13	12	33	70	123	137	311	888	7	9	10	19	143	158	354	977
1924	24	23	17	55	125	152	292	847	6	5	8	31	155	180	317	933
1923	10	12	29	60	109	143	279	771	5	5	7	17	124	160	315	848
1922	16	11	21	46	100	113	212	700	4	3	7	19	120	127	240	765
1921	10	12	28	35	114	146	222	668	6	6	3	14	130	164	253	717
1920	14	12	24	42	84	96	218	594	9	11	11	14	107	119	253	650
1919	10	14	27	29	75	93	181	506	6	9	7	8	91	116	215	543
1918	6	8	14	31	53	66	189	438	5	4	1	8	64	78	204	477
1917	15	10	12	27	43	58	141	359	4	5	4	9	62	73	157	395
1916	9	8	16	27	57	74	179	348	5	4	6	4	71	86	201	379
1915	6	4	15	27	52	57	154	272	10	11	4	4	68	72	173	303
1914	8	5	17	23	65	70	205	274	5	4	4	4	78	79	226	301
1913	8	3	18	12	81	85	271	220	5	3	—	6	94	91	289	238
1912	7	4	15	8	100	100	341	124	4	1	5	5	111	105	361	137
1911	16	10	21	8	83	101	291	116	2	5	3	4	101	116	315	128
1910+	83	85	113	38	574	634	1,672	380	27	22	23	12	684	741	1,808	430
Total. . .	2,008	1,951	2,111	3,807	25,906	26,654	31,195	72,558	845	855	929	2,700	28,759	29,460	34,235	79,065

A summary of Table 20 appears below (Table 21)—

TABLE 21—SUMMARY OF INJECTIONS GIVEN BY ALL AGENCIES DURING THE YEAR ENDING 31st DECEMBER, 1963. (SUMMARY OF DATA IN TABLE 20)

First injections	34,215
Second injections	49,523
Third injections	43,835
Fourth injections	43,946
Total	<u>171,519</u>

During 1963, there continued to be two pleasing aspects. Firstly, the number of Local Boards of Health providing free poliomyelitis immunization facilities locally. Secondly, the enthusiasm of the Local Board officers in trying to get a high response rate from local residents. The number of poliomyelitis immunization injections given during the year by the separate Local Boards of Health is shown in Table 22. This table sets out the number of injections given by each Board for each month of the year. The number of injections are shown under the month in which the “Return of Injections Given” forms were received from each Local Board of Health, and not necessarily in the month in which the injections were actually given.

TABLE 22.—NUMBER OF POLIOMYELITIS IMMUNIZATION INJECTIONS GIVEN FOR THE YEAR ENDED 31ST DECEMBER, 1963, BY THE SEPARATE LOCAL BOARDS OF HEALTH—*continued*.

List of Local Boards of Health	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Noarlunga	93	105	257	142	80	87	—	194	102	—	166	193	1,419
Onkaparinga	—	—	128	265	334	259	145	127	79	60	—	—	1,397
Orroroo	42	—	36	58	31	39	46	50	14	26	33	22	397
Owen	20	16	143	—	33	28	12	—	10	14	11	5	292
Paringa	Carried out by Renmark												
Peake	—	27	116	261	141	58	37	—	18	6	—	73	737
Penola	—	99	89	78	110	196	101	74	89	57	—	615	1,508
Peterborough Town	—	212	—	—	138	—	111	—	—	121	—	86	668
Peterborough District	Included in Peterborough Town												
Pinnaroo	60	25	—	35	38	19	17	218	10	31	71	—	524
Pirie	Included in Port Pirie												
Port Augusta	—	290	272	333	1,911	—	352	38	—	—	593	—	3,789
Port Broughton	16	7	4	12	19	8	14	26	13	5	18	20	162
Port Elliott	—	—	151	—	—	96	—	—	—	23	—	—	270
Port Germein	59	—	111	116	159	—	87	—	122	77	58	52	841
Port Lincoln	229	99	118	164	196	224	97	190	220	503	—	432	2,472
Port MacDonnell	—	—	—	—	—	—	—	248	178	27	—	—	453
Port Pirie	592	504	363	—	275	372	—	—	501	435	—	—	3,042
Port Wakefield	17	—	5	6	2	157	50	—	28	30	11	—	306
Quorn	34	—	152	36	—	14	20	—	23	—	33	47	359
Redhill	—	9	29	20	7	12	4	—	7	31	18	—	137
Renmark Town	327	—	—	112	—	82	—	129	—	—	—	126	776
Renmark Irrigation Trust	Included in Renmark												
Riverton	126	27	25	20	—	28	9	—	—	48	25	—	308
Robe	—	—	—	—	—	—	—	—	272	—	—	65	337
Robertstown	—	—	—	—	—	—	—	166	—	—	—	130	296
Saddleworth	102	200	100	43	89	27	16	21	—	24	50	—	672
Salisbury	—	145	548	445	854	870	832	935	687	1,043	908	699	7,966
Sedan	—	—	—	—	—	—	—	132	143	218	—	4	497
Snowtown	—	—	47	28	—	—	—	—	—	—	—	70	145
Spalding	Carried out by Clare District												
Stirling	94	102	—	110	460	343	274	107	—	105	76	63	1,734
Strathalbyn Town	85	165	186	276	241	235	—	—	—	112	56	—	1,356
Strathalbyn District	Included in Strathalbyn Town												
Streaky Bay	—	—	—	—	—	—	—	—	192	—	67	—	259
Tantanoola	Included in Millicent												
Tanunda	—	93	86	—	—	67	—	—	—	92	126	72	536
Tatiara	54	—	109	92	45	37	1,937	486	—	208	258	—	3,226
Tea Tree Gully	138	98	101	125	95	79	99	140	154	154	170	—	1,353
Truro	—	—	—	—	—	—	53	—	—	79	—	—	132
Tumby Bay	120	—	182	219	179	262	—	—	123	—	111	—	1,196
Upper Wakefield	—	5	11	—	128	35	—	—	—	28	8	—	215
Victor Harbour	—	—	186	646	299	—	135	—	—	—	—	—	1,266
Waikerie	—	—	272	—	—	—	—	233	—	—	—	238	743
Wallaroo	73	62	38	62	76	54	58	38	27	23	24	33	568
Warooka	20	—	—	14	7	8	14	6	4	12	12	14	111
Whyalla Town Commission	—	—	323	340	—	232	—	—	—	474	—	455	1,824
Willunga	120	158	132	116	32	21	30	—	51	57	59	30	806
Wilmington	82	—	25	—	—	—	47	—	—	56	—	5	215
Yankalilla	—	—	—	—	81	—	18	—	3	—	—	—	102
Yorke Peninsula	—	131	—	129	—	122	95	—	157	—	74	—	708
Yorke town	—	—	—	—	—	79	106	185	164	—	151	—	685
Total	6,665	11,188	14,389	13,648	17,549	14,503	13,197	13,001	12,238	14,028	14,776	11,131	156,313

The Future Work—The introduction of a booster (fourth) injection throughout Australia has given a fillip to the demand for poliomyelitis immunization in South Australia. Concurrently, it has thrown a great load on the clerical work of the Poliomyelitis Services Branch, particularly in the recording and filing sections. Because of the importance of continuing the Department's central index showing each poliomyelitis immunization injection given to individual applicants in South Australia, approval was given for the extension of the buildings at Norwood to allow for expansion of the recording and filing needs. The building extensions are nearing completion and should be available for use in early 1964. When this additional space is available, poliomyelitis immunization vaccine will be made available, for the first time, to private medical practitioners in South Australia. As far as poliomyelitis immunization work is concerned, the future work of the Branch will then consist of—

- issuing poliomyelitis vaccine to local boards of health for free immunization,
- issuing of vaccine to private medical practitioners,
- immunization in country areas outside Local Government Boundaries by the Poliomyelitis Services staff of residents who could not otherwise obtain free immunization,
- immunization, without charge, by appointment at the Poliomyelitis Services Office, Norwood, for people who find it more convenient to attend there than at their local council office or at their private doctor's surgery,
- the maintenance of the central index of all poliomyelitis immunization injections given in South Australia by entering on to individual applicant's record cards particulars supplied from the above sources after injections have been given,
- the continued follow-up of reported suspected cases of poliomyelitis in both immunized and non-immunized patients so that the efficacy of the poliomyelitis vaccine may be evaluated and its duration of protection ascertained.
- the encouragement to Local boards of Health to continue their free immunization programmes and to keep the warm relationship which exists between the officers of the Local Boards of Health and the Poliomyelitis Services staff,
- the arranging of suitable publicity to step up the response for poliomyelitis immunization as the pressure of the "fourths" programme lessens.

The future aims in the Poliomyelitis Services Branch's work on immunization can be clearly set out and are achievable. The future of the medical rehabilitation work which has been carried out for some years with post-poliomyelitis patients from past epidemics is less sure. This unspectacular but useful work can only be expanded by the recruitment of a medical officer and a second physiotherapist interested in the care of the long-term chronically handicapped patient. The staffing needs in this connexion were discussed in more detail in the Annual Report for the year ended 31st December, 1962. The position has not changed—no suitable applicants have been forthcoming. The results achieved by the experienced, skilled and interested physiotherapist who has worked full-time in the Poliomyelitis Branch for several years have made the medical rehabilitation work an important function. The work is well worth extending and approval was readily given some time ago for additional staff to be employed. However, this extension of the medical rehabilitation work of the Branch must wait on the availability of another medical officer and physiotherapist with the particular skills and the interests that the work demands.

5. TUBERCULOSIS BRANCH

The number of notifications of new cases of tuberculosis was 236 compared with a total of 242 for 1962 and 214 for 1961.

Table 23 shows the source of all new notifications of pulmonary and non-pulmonary disease. It is to be noted that the compulsory surveys brought to light 25 per cent of the total of new pulmonary cases, but the general practitioner notified 30 per cent of the new pulmonary cases. This means that the general practitioner is still the most important person in our tuberculosis control programme. This is emphasized in Table 32A (City X-ray Unit Examinations) which shows the work done by the City X-ray Unit. Sixteen cases were found out of a total of 5,376 patients referred by doctors for minor symptoms. This is 30 per cent of the total number of cases found by the State X-ray Health Surveys. In other words, one in 330 of patients referred by doctors was in point of fact suffering from active tuberculous disease. It emphasizes that tuberculosis is a disease requiring the closest co-operation of all branches of the profession.

Table 24 shows the age, sex and stage of the pulmonary cases. Table 24A is a supplementary return showing age, sex and type of disease in the remainder of the notifications.

Tables 25 and 25A show the Local Board of Health origin of pulmonary and non-pulmonary disease.

Migrants—There were sixteen cases notified in migrants within five years of arrival compared with nineteen for last year.

Table 26 (notification of migrants in South Australia for the year ending 31st December, 1963) sets out in greater detail the figures relating to migrants.

It will be noted that 22 per cent of all new cases in 1963 occurred in migrants.

Mortality—It is pleasing to record yet a further drop in the mortality rate. This is shown in Table 27.

Table 28 shows these deaths by age and sex.

Tuberculosis Allowance—The numbers of persons on tuberculosis allowance as at 31st December, 1963 was 133. In 1962 the figure was 148, and 171 for 1961. The numbers of persons receiving tuberculosis allowance is another fairly accurate index to progress in tuberculosis control. The fact that a person is in receipt of a tuberculosis allowance means that his disease after careful assessment is regarded as active. As there has been no hardening in the official attitude to the granting of the allowance, rather the reverse, the drop in the figure from 171 in 1961 to 133 in 1963 simply means that in our community each year there are less and less individuals whose disease is considered a sufficient public health hazard to justify the special tuberculosis benefit.

Table 29 shows age, sex and period of receipt of the allowance.

Mass Miniature Radiography—During 1963 a total of 147,077 were X-rayed by 70 mm. radiography as follows—

Metropolitan compulsory surveys	60,200
Country compulsory surveys	55,843
City Static Unit	31,034

Tables 30, 31 and 32 show details by age. The yield of active cases from the compulsory surveys is now falling to low levels in the metropolitan areas. At age 30-34 one person in every 1,000 was suffering from active disease, but when all ages are considered, for every 5,000 persons X-rayed in the metropolitan area only one person was tuberculous, and in the country only two. The time will be coming when some modification of our State X-ray Surveys will be necessary. However, in Queensland in 1960 the first compulsory X-ray Survey brought to light one person in every 300 with suspected active disease. (Cairns figures.)

It is not claimed that our continued compulsory surveys over the past ten years have been entirely responsible for the very different rates we have in South Australia, but there is no doubt they have played no small part. Our population has come to accept State X-ray Surveys as a sensible and reasonable public health measure. The caravans have been very successful and the equipment has given little trouble. While State X-ray Health Surveys can be conducted with safety and convenience and whilst in the middle and productive years of life, in every one of 2,000 people there is an unsuspected infectious tuberculous person, it is not considered that the time for any relaxation in the State X-ray Health Surveys has arrived.

Chest Clinic—The Chest Clinic and Contact Clinic attendances are shown in Table 33.

Tuberculin Testing and B.C.G. Vaccination—The tuberculin test in school children is really the best index of a tuberculosis control program, but this statement requires qualification. It has recently been shown that the tuberculin test is much less specific than it was considered to be a few years ago. A decade or so ago, if a person's tuberculin reaction was positive, it has confidently stated that infection with virulent, human or bovine organism had occurred. Today we are less sure.

In North Queensland 25 per cent of school entrants at age five or six react to tuberculin but this certainly does not mean that 25 per cent of school children have been infected with virulent organisms, because tuberculosis amongst children in North Queensland is virtually non-existent. The position is similar, but less pronounced, in Western Australia, and is thought to be due to infection with other non-pathogenic mycobacteria. Here in South Australia we do not appear to be pestered by this problem and we still regard the positive tuberculin test as an indicator of infection with human (or bovine) strains.

Table 34 shows the results of some epidemiological surveys.

Table 35 shows the tuberculin sensitivity amongst contacts examined at the Clinic.

Table 36 shows the B.C.G. vaccinations given.

Table 37 shows results of retesting for tuberculin sensitivity following B.C.G. vaccination.

TABLE 23—SOURCE OF NOTIFICATIONS FOR YEAR ENDED 31st DECEMBER, 1963—SOUTH AUSTRALIA

Source	Pulmonary		No. of Non-Pulmonary Cases
	No. of Cases	Percentage	
Mass community surveys	52	25.4	—
Private Medical Practitioners—			
(a) Direct	62	30.2	15
(b) Via Chest Clinic			
General hospitals	27	13.2	14
Chest hospitals, annexes and sanatoria	—	—	—
Chest clinics	22	10.7	1
Repatriation clinics and hospitals	9	4.4	1
Death certificates	5	2.4	—
Transfers-in	8	3.9	—
Special Groups—			
Mental hospital surveys	2	1.0	
Gaol surveys			
City Static Unit Survey—			
Volunteers	18	8.8	
Inactive previous surveys—re-X-rayed			
Migrant compulsory survey			
Contact of positive Mantoux school child			
State Government pre-employment X-rays			
Totals	205	100.0	31

TABLE 24—NOTIFICATIONS OF PULMONARY TUBERCULOSIS FOR YEAR ENDED 31st DECEMBER, 1963—NEW ACTIVE CASES (AND PROBABLY ACTIVE CASES)—SHOWING AGE, SEX AND STAGE OF DISEASE—SOUTH AUSTRALIA

Age Group	Males				Females				Persons				Total	Per Cent
	Min.	Mod. Adv.	Adv.	Death Cert.	Min.	Mod. Adv.	Adv.	Death Cert.	Min.	Mod. Adv.	Adv.	Death Cert.		
0-4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5-9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10-14	—	—	—	—	—	1	—	—	—	1	—	—	1	0.6
15-19	2 (2)	—	1 (1)	—	4 (4)	3 (3)	—	—	6 (6)	3 (3)	1 (1)	—	10 (10)	6.1
20-24	3 (2)	3 (3)	—	—	6 (3)	2 (2)	—	—	9 (5)	5 (5)	—	—	14 (10)	8.5
25-29	2 (2)	—	—	—	—	1	—	—	2 (2)	1	—	—	3 (2)	1.8
30-34	4 (2)	5 (5)	1 (1)	—	5	5 (5)	—	—	9 (2)	10 (10)	1 (1)	—	20 (13)	12.2
35-39	6 (3)	6 (5)	—	—	1	—	—	—	7 (3)	6 (5)	—	—	13 (8)	7.9
40-44	5 (4)	8 (7)	—	—	5 (2)	1 (1)	—	—	10 (6)	9 (8)	—	—	19 (14)	11.6
45-49	5 (4)	5 (5)	1 (1)	1	3 (3)	4 (4)	—	—	8 (7)	9 (9)	1 (1)	1	19 (17)	11.6
50-54	3 (3)	4 (3)	2 (2)	—	—	1	—	—	3 (3)	5 (3)	3 (3)	—	11 (9)	6.7
55-59	3 (2)	7 (7)	2 (2)	—	1 (1)	1 (1)	1 (1)	—	4 (3)	8 (8)	3 (3)	—	15 (14)	9.2
60-64	3 (1)	4 (4)	—	—	1	1 (1)	—	—	4 (1)	5 (5)	—	—	9 (6)	5.5
65-69	2 (1)	5 (4)	—	1	1 (1)	—	—	—	3 (2)	5 (5)	—	1	9 (7)	5.5
70-74	1 (1)	2 (1)	2 (2)	1	—	—	—	1	1 (1)	2 (1)	2 (2)	2	7 (4)	4.3
75-	2 (2)	6 (5)	—	—	2 (2)	2 (1)	1 (1)	1	4 (4)	8 (6)	1 (1)	1	14 (11)	8.5
N/S	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	41 (29)	55 (49)	9 (9)	3	29 (16)	22 (18)	3 (3)	2	70 (45)	77 (67)	12 (12)	5	164 (124)	
Per cent	25.0	33.5	5.5	1.8	17.7	13.4	1.8	1.3	42.7	47	7.3	3.0	—	100

Includes Transfers-in where signified —
Includes Bacillary cases where signified (124)

TABLE 24A—SUPPLEMENTARY RETURN OF TUBERCULOSIS NOTIFICATIONS FOR YEAR ENDED 31st DECEMBER, 1963—SHOWING AGE, SEX AND FORM—SOUTH AUSTRALIA

Age Group	Males					Females					Persons					Total	Per Cent
	Primary	Pleurisy with Effusion	Reactivated	Transfers in	Non-Pulmonary	Primary	Pleurisy with Effusion	Reactivated	Transfers in	Non-Pulmonary	Primary	Pleurisy with Effusion	Reactivated	Transfers in	Non-Pulmonary		
0-4	8 (1)	—	—	—	2 (1)	2 (1)	—	—	—	3	10 (2)	—	—	—	5 (1)	15 (3)	20.9
5-9	1	—	—	—	2 (1)	2	—	—	—	2 (1)	3	—	—	—	4 (2)	7 (2)	9.9
10-14	1	—	—	—	1	—	—	—	—	—	1	—	—	—	1	2	2.6
15-19	—	—	—	—	1 (1)	—	—	—	—	—	—	—	—	—	1 (1)	1 (1)	1.3
20-24	—	2	—	—	2 (1)	—	1 (1)	—	1	2 (2)	—	3 (1)	—	1	4 (3)	8 (4)	11.2
25-29	—	1	—	—	2 (2)	—	—	2 (2)	—	—	—	2	2 (2)	—	4 (2)	8 (4)	11.2
30-34	—	—	—	—	—	—	1 (1)	—	—	—	—	1 (1)	—	—	—	1 (1)	1.3
35-39	—	1	1 (1)	—	3 (2)	—	—	—	—	1 (1)	—	1	1 (1)	—	4 (3)	6 (4)	8.4
40-44	—	—	—	—	—	—	—	—	—	2 (1)	—	—	—	—	2 (1)	2 (1)	2.6
45-49	—	—	—	1	—	—	1	—	—	2 (2)	—	1	—	1	2 (2)	4 (2)	5.6
50-54	—	1 (1)	—	2 (1)	—	—	—	—	—	—	—	1 (1)	—	2 (1)	—	3 (2)	4.3
55-59	—	—	—	1 (1)	1 (1)	—	1	1 (1)	—	1 (1)	—	1	1 (1)	1 (1)	2 (2)	5 (4)	6.9
60-64	—	—	2 (1)	1 (1)	—	—	—	1 (1)	—	1 (1)	—	—	3 (2)	1 (1)	1 (1)	5 (4)	6.9
65-69	—	—	1	—	—	—	—	—	—	—	—	—	1	—	—	1	1.3
70-74	—	1 (1)	—	1 (1)	—	—	—	—	—	1 (1)	—	1 (1)	—	1 (1)	1 (1)	3 (3)	4.3
75-	—	—	—	—	—	—	—	—	1 (1)	—	—	—	—	1 (1)	—	1 (1)	1.3
N/S	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	10 (1)	6 (2)	4 (2)	6 (4)	14 (9)	4 (1)	5 (2)	4 (4)	2 (1)	17 (10)	14 (2)	11 (4)	8 (6)	8 (5)	31 (19)	72 (36)	—
Per cent.	13.9	8.3	5.6	8.3	19.6	5.6	6.9	5.6	2.6	23.6	19.6	15.2	11.1	11.1	43.0	—	100.0

Transfers-in 8—See special column
Includes Bacillary cases where signified (36)

TABLE 25—PULMONARY TUBERCULOSIS 1963
SOUTH AUSTRALIA
Local Board of Health Origin

METROPOLITAN		COUNTRY	
Adelaide	13	Angaston	1
Brighton	5	Berri	1
Colonel Light Gardens	1	Burra	3
East Torrens County Board	11	Bute	1
Enfield	14	Freeling	1
Glenelg	2	Gawler	3
Henley and Grange	3	Gladstone	1
Hindmarsh	4	Kadina—Town of	1
Marion	12	Karoonda	1
Mitcham	8	Mallala	1
Port Adelaide	12	Mannum	2
Prospect	1	Meningie	1
Tea Tree Gully	4	Minlaton	1
Thebarton	2	Morgan	3
Unley	8	Mount Gambier—Town of	2
Walkerville	1	Mount Gambier—District of	1
West Torrens	3	Mudlawirra	1
Woodville	10	Noarlunga	1
	114	Onkaparinga	2
		Peake	1
		Penola	6
		Peterborough	1
		Port Augusta	5
		Port Lincoln	3
		Port Pirie	2
		Redhill	1
		Renmark	2
		Salisbury	11
		Spalding	1
		Stirling	1
		Tanunda	1
		Tatiara	1
		Truro	1
		Victor Harbour	1
		Wallaroo	1
		Warooka	2
		Whyalla	2
		Yorke Peninsula	2
Transfers-in	8		
Gaol	1		
Seaman	1		
Renotifications	8		
	132		73

TABLE 25A—NON-PULMONARY TUBERCULOSIS—1963
SOUTH AUSTRALIA
Local Board of Health Origin

METROPOLITAN		COUNTRY	
Adelaide	1	Berri	1
East Torrens County Board	3	Murat Bay	1
Enfield	2	Onkaparinga	1
Glenelg	1	Penola	2
Hindmarsh	1	Pinnaroo	1
Marion	3	Port Augusta	4
Mitcham	1	Port Pirie	1
Port Adelaide	1		
Prospect	1		
Thebarton	2		
Unley	1		
Woodville	3		
	20		11

TABLE 26—NOTIFICATION OF MIGRANTS IN SOUTH AUSTRALIA FOR YEAR ENDING 31ST DECEMBER, 1963

Arrival in Australia	British				Non-British			
	Assisted	Non-Assisted	Total	Per Cent of Total Notified Migrants	Assisted	Non-Assisted	Total	Per Cent of Total Notified Migrants
Within 1 year ..	1	—	1	2	—	2	2	4
Within 5 years .	4	1	5	10	7	1	8	15
Within 10 years .	1	—	1	2	9	2	11	21
Over 10 years .	5	3	8	15	11	5	16	30
Totals	11	4	15	29	27	10	37	71

Assisted Migrants—38 (73 per cent). Non-assisted Migrants—14 (27 per cent). Migrants comprised 22 per cent of all notified cases which totalled 236.

COUNTRY OF ORIGIN		
	Assisted	Non-Assisted
England	7	2
Scotland	4	—
Wales	—	1
Ireland	—	1
Canada	—	1
South Africa	—	1
Italy	1	1
Greece	4	—
Czechoslovakia	1	—
Yugoslavia	4	2
Sweden	—	1
Roumania	1	—
Ukraine	1	—
Latvia	3	—
Poland	6	1
Germany	3	—
Austria	1	—
France	—	1
Holland	2	1
China	—	1
	38	14

TABLE 27—MORTALITY RATES OVER PAST FIVE YEARS

1959	5.43 deaths per 100,000
1960	4.02 deaths per 100,000
1961	5.05 deaths per 100,000
1962	3.64 deaths per 100,000
1963	2.7 deaths per 100,000

TABLE 28—PULMONARY TUBERCULOSIS—SOUTH AUSTRALIA—DEATHS, 1963

Age at Death	Male	Female	Total
35-39 years.....	2	1	3
40-44 years.....	—	1	1
45-49 years.....	2	1	3
50-54 years.....	2	—	2
55-59 years.....	1	1	2
60-64 years.....	2	—	2
65-69 years.....	2	1	3
70-74 years.....	5	1	6
75 and over	3	2	5
Total	19	8	27

TABLE 29—TUBERCULOSIS ALLOWANCES—LOCATION OF ALLOWEES AS AT 31ST DECEMBER, 1963—
SOUTH AUSTRALIA
(A)

Age	Receiving Treatment in Institution			Receiving Domiciliary Treatment		
	Males	Females	Persons	Males	Females	Persons
-19	1	3	4	1	2	3
20-24	—	1	1	4	3	7
25-29	2	2	4	2	—	2
30-34	5	—	5	2	1	3
35-39	2	—	2	2	—	2
40-44	3	—	3	7	1	8
45-49	2	1	3	10	2	12
50-54	9	1	10	5	1	6
55-59	5	1	6	7	3	10
60-64	4	2	6	11	1	12
65-69	3	1	4	4	1	5
70-74	4	—	4	2	2	4
75-	3	—	3	2	2	4
Totals	43	12	55	59	19	78

(B)

Period in Receipt of Allowance	Males	Females	Persons
Under 1 year	63	23	86
1- 2 years	17	4	21
2- 3 years	5	1	6
3- 4 years	2	—	2
4- 5 years	1	—	1
5- 6 years	4	—	4
6- 7 years	1	—	1
7- 8 years	1	—	1
8- 9 years	—	—	—
9-10 years	1	—	1
10-11 years	4	—	4
11-12 years	3	—	3
12-13 years	1	—	1
13-14 years	1	—	1
1948	1	—	1
Totals	105	28	133

TABLE 30—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31st DECEMBER, 1963—
SOUTH AUSTRALIA
METROPOLITAN AREAS

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Probably Active	Inactive	Suspect Active at 31/12/63 (Cases)	Other Conditions	
10-14	19	—	—	—	—	—
15-19	7,635	—	3.0	—	1.8	—
20-24	5,665	—	2.7	—	2.1	1
25-29	5,903	—	8.5	—	1.5	—
30-34	5,642	0.9	12.2	3	3.0	—
35-39	6,294	—	21.1	—	2.2	1
40-44	6,133	0.3	25.3	1	2.3	—
45-49	5,238	0.4	25.9	1	3.2	—
50-54	4,550	—	31.7	1	3.1	—
55-59	3,703	0.3	36.4	1	7.0	—
60-64	2,926	—	56.4	—	6.5	1
65-69	2,516	—	46.9	1	8.0	2
70-74	2,000	0.5	47.5	—	6.0	—
75-	1,976	—	43.0	—	7.1	2
Totals.	60,200	11	1,311	8	202	7

TABLE 31—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31st DECEMBER, 1963—
SOUTH AUSTRALIA
CITY STATIC UNIT

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Probably Active	Inactive	Suspect Active at 31/12/63 (Cases)	Other Conditions	
0-14	1,584	—	17.7	1	34.6	—
15-19	7,205	0.3	3.9	—	34.7	1
20-24	3,559	0.6	7.3	1	3.9	—
25-29	2,430	0.4	20.1	—	4.5	—
30-34	2,710	0.7	40.0	1	7.8	1
35-39	2,829	0.7	53.0	2	8.5	1
40-44	2,387	1.3	74.5	1	9.2	2
45-49	1,725	2.9	109.6	1	16.8	—
50-54	1,428	2.8	157.6	1	19.6	—
55-59	1,217	0.8	182.4	1	32.0	—
60-64	1,433	2.8	160.0	—	23.7	—
65-69	1,189	—	160.5	—	16.9	1
70-74	624	—	232.4	—	27.2	—
75-	714	2.8	222.7	—	44.8	1
Totals.	31,034	28	1,928	9	371	7

TABLE 32—TUBERCULOSIS—MASS X-RAY SURVEYS FOR YEAR ENDED 31ST DECEMBER, 1963—
SOUTH AUSTRALIA
COUNTRY AREAS

Age	Number X-rayed	Per 1,000 Examined				Active from Survey of Previous Years
		Active and Probably Active	Inactive	Suspect Active at 31/12/63 (Cases)	Other Conditions	
0-14	52	—	—	—	—	—
15-19	6,203	0.2	2.6	—	2.4	—
20-24	5,073	0.4	5.5	—	1.2	—
25-29	4,470	0.2	3.8	—	1.6	—
30-34	4,891	0.6	9.6	2	1.6	1
35-39	5,543	0.4	15.3	—	1.4	—
40-44	5,378	0.7	18.2	—	1.9	3
45-49	5,138	0.2	20.7	—	4.7	1
50-54	4,729	0.4	24.5	—	3.6	1
55-59	3,800	0.8	27.9	—	3.2	—
60-64	3,172	—	36.3	—	7.6	—
65-69	2,698	1.5	44.1	1	8.2	—
70-74	2,213	—	45.7	—	9.0	2
75-	2,483	—	45.5	—	8.5	—
Totals.....	55,843	23	1,077	3	193	8

TABLE 32A—CITY X-RAY UNIT EXAMINATIONS, 1963—SOUTH AUSTRALIA

Categories	Number Examined	New Active Tuberculosis X-rayed Current Year	Active Rate per 1,000 Examined	Active Tuberculosis from Previous Years
Contacts	606	—	—	—
Probationer Nurses, Police Recruits etc.	650	—	—	—
Migrants (New Arrivals)	5,639	1	.18	—
Referred by private doctors	5,376	16	2.97	—
Commonwealth Public Servants	1,696	—	—	—
State public servants	567	—	—	1
Industrial groups	415	—	—	—
Pensioners	1,710	—	—	—
Volunteers	5,257	4	.76	1
Teachers Training College	3,336	—	—	—
University students	1,257	—	—	—
Mantoux positive children	1,608	2	1.24	—
Inactive previous surveys—Re-X-rayed	1,126	4	3.54	5
Totals.....	29,243	27	—	7

TABLE 33—TUBERCULOSIS SERVICES—SOUTH AUSTRALIA
CHEST CLINIC AND CONTACT CLINIC ATTENDANCES FOR THE YEAR ENDING 31ST DECEMBER, 1963

	Direct Referral by Private Doctor	Referral Resulting from Abnormal Mass X-ray Film	Contact of Known Case	Routine Examination of Police Recruits, Nurses, University Students, Etc.	Total
First visit to Clinic	437	288	1,460	1,431	3,616
Previously attended Clinic but first time in current year					8,004
Subsequent attendance in current year					18,644
			Adults	Children 16 Years and Under	30,264
Total attendance for year ending 31st December, 1963			23,771	6,493	

TABLE 34—TUBERCULOSIS—TUBERCULIN TESTS FOR YEAR ENDED 31st DECEMBER, 1963—
SOUTH AUSTRALIA
EXCLUDING CONTACTS

Age	Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Excluding Previous B.C.G.		From Previous B.C.G.		No.	Per Cent
				No.	Per Cent	No.	Per Cent		
0- 4.....	474	461	13	15	3·2	37	7·8	422	89·0
5- 9.....	11,311	11,308	3	151	1·3	202	1·8	10,958	96·9
10-14.....	11,854	11,850	4	475	4·0	395	3·3	10,984	92·7
15-19.....	2,677	2,671	6	184	6·9	1,217	45·5	1,276	47·6
20-24.....	688	686	2	71	10·3	474	68·9	143	20·8
25-29.....	259	257	2	76	29·3	114	44·0	69	26·7
30-34.....	267	267	—	103	38·6	82	30·7	82	30·7
35-39.....	214	214	—	110	51·4	53	24·7	51	23·9
40-44.....	184	184	—	95	51·6	35	19·0	54	29·4
45-49.....	140	140	—	74	52·8	26	18·6	40	28·6
50-54.....	104	104	—	58	55·8	14	13·4	32	30·8
55-59.....	65	65	—	35	53·8	9	13·8	21	32·4
60-64.....	71	71	—	40	56·3	11	15·5	20	28·2
65-69.....	22	22	—	15	68·2	2	9·0	5	22·8
70-74.....	20	20	—	14	70·0	—	—	6	30·0
75-	16	16	—	8	50·0	—	—	8	50·0
Totals	28,366	28,336	30	1,524		2,671		24,171	

TABLE 35—TUBERCULOSIS—TUBERCULIN TESTS FOR YEAR ENDED 31st DECEMBER, 1963—
SOUTH AUSTRALIA
CONTACTS ONLY

Age	Number Tested	Type of Test		Positive				Negative	
		Mantoux 10 Tu of OT	Heaf OT	Excluding Previous B.C.G.		From Previous B.C.G.		No.	Per Cent
				No.	Per Cent	No.	Per Cent		
0- 4.....	893	857	36	27	3·1	442	49·6	424	47·3
5- 9.....	656	633	23	42	6·4	322	48·8	292	44·8
10-14.....	292	289	3	21	7·2	157	53·9	114	38·9
15-19.....	209	209	—	31	14·8	130	62·4	48	22·8
20-24.....	169	166	3	32	19·0	76	45·0	61	36·0
25-29.....	171	164	7	44	25·7	63	36·8	64	37·5
30-34.....	170	161	9	56	32·9	61	35·9	53	31·2
35-39.....	146	144	2	55	37·7	37	25·4	54	36·9
40-44.....	126	126	—	52	41·3	27	21·5	47	37·2
45-49.....	84	84	—	41	48·8	15	17·8	28	33·4
50-54.....	56	56	—	28	50·0	7	12·5	21	37·5
55-59.....	41	41	—	27	66·0	2	5·0	12	29·0
60-64.....	22	22	—	11	50·0	3	13·5	8	36·5
65-69.....	16	16	—	11	69·0	1	6·0	4	25·0
70-74.....	13	13	—	10	77·0	—	—	3	23·0
75-	14	14	—	11	78·6	—	—	3	21·4
Totals	3,078	2,995	83	499	16·2	1,343	43·6	1,236	40·2

TABLE 36—B.C.G. VACCINATIONS, 1963—SOUTH AUSTRALIA

Age Group	Contacts	Others	Total Vaccinated
0- 4.....	297	47	344
5- 9.....	173	19	192
10-14.....	87	10,937	11,024
15-19.....	50	1,198	1,248
20-24.....	47	93	140
25-29.....	52	29	81
30-34.....	41	33	74
35-39.....	33	31	64
40-44.....	29	15	44
45-49.....	17	17	34
50-54.....	11	8	19
55-59.....	7	3	10
60-64.....	5	1	6
65-69.....	1	1	2
70-74.....	—	—	—
75 and over	—	—	—
Total ...	850	12,432	13,282

TABLE 37—RETESTING OF B.C.G. VACCINATIONS FOR YEAR ENDED 31st DECEMBER, 1963—
SOUTH AUSTRALIA

	Retested	Post B.C.G. Positive	Per Cent Positive	Post B.C.G. Negative	Per Cent Negative
1st retest—2 months	804	771	95.9	33	4.1
2nd retest—12 months	567	532	93.8	35	6.2
3rd retest—2 years	389	367	94.3	22	5.7
4th retest—3 years	356	331	93.0	25	7.0
5th retest—4 years	260	248	95.4	12	4.6
6th retest—5 years	267	244	91.4	23	8.6
7th retest—6 years	194	182	93.8	12	6.2
8th retest—7 years	138	132	95.6	6	4.4
9th retest—8 years	384	368	95.8	16	4.2
Total	3,359	3,175	94.5	184	5.5

6. SUMMARY AND CONCLUSIONS

Each Branch of the Department has recorded events worthy of comment.

Further successes are apparent in the control of communicable diseases. For the first time there has been no case of diphtheria, and the decreases in infectious hepatitis and poliomyelitis have continued. These and other factors have contributed to decreased infant mortality, so that the infant mortality rate is the lowest yet reported.

The successful cultivation of trachoma virus at the Institute of Medical and Veterinary Science is a notable achievement, and is allowing more thorough investigation of this disease.

The reported increase in infections of the bowel demands further investigation, which is proceeding.

So successful have been the schemes for common final treatment and disposal of effluents from septic tanks, that the demand for help in planning and installing these systems has increased very greatly.

The health of school children and student teachers continues to be a matter of major interest. A further decrease is seen in the proportion of children showing dental defects, but allergic disorders and hearing defects were reported more frequently.

It is gratifying to record that there has still been no case of poliomyelitis in any person who has received three injections of Salk vaccine. Nevertheless, because some few cases have occurred in such persons in other places, a fourth (booster) dose of vaccine is now being given.

The report of the Tuberculosis Branch emphasizes again the continued value of community-wide chest X-ray surveys. The further fall in mortality and the satisfactory trend of the tuberculin rate are both causes for satisfaction. Even so, tuberculosis still claims far more lives than all other infections and notifiable diseases together, and is still responsible for far too much long-term illness. It is therefore gratifying that the Governments of the Commonwealth and all States have agreed to renew the arrangement covering the national campaign against tuberculosis for a further five years.

Once again the co-operation of most local boards of health has been of great value, but it is noticeable that some are considerably less active than others.

The Board and Departmental Officers attach the greatest value to the services rendered by the Institute of Medical and Veterinary Science. While the assistance of all divisions of the Institute is readily available when needed, the help of the Virology division has been especially appreciated, and without the constant help of the Division of Bacteriology much of the public health work of the State would have been quite impossible.

The Board appreciates the work of its own officers and the staff of the Department of Public Health, and is thankful for continued assistance from many other Departments of Government.

To you, Sir, we offer grateful thanks for continued interest and support over many years.

M. E. S. BRAY, Secretary.
Adelaide, 11th August, 1964.

P. S. WOODRUFF, Chairman
J. B. CLELAND
G. H. McQUEEN
C. WILLIAMSON
A. BERTRAM COX } Members